

PROVISIONAL GEOMAGNETIC  
DATA PLOTS  
NO.19

(January - June, 1999)

August 1999

DATA ANALYSIS CENTER FOR GEOMAGNETISM  
AND SPACE MAGNETISM  
GRADUATE SCHOOL OF SCIENCE,  
KYOTO UNIVERSITY



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## PREFACE

This booklet contains provisional plots of the geomagnetic data for January - June, 1999 with the Kp index and the international sunspot number. One minute values of the horizontal (or the northward) component are plotted after subtracting the monthly mean of the five-quiet days. The purpose of this booklet is to give the information of world-wide geomagnetic disturbances with high-time resolution as early as possible. Hence the provisional data without base-line adjustment or noise reduction (marked with \* in Table 1) are included. There still remain artificial noises on the plots though we tried to eliminate them. Users should be careful on these points, and the plots in this booklet should not be used in other publications.

These data were kindly provided through the following organizations.

- (1) World Data Center-A for STP and The U.S. Geological Survey .
- (2) Leirvogur Magnetic Observatory, University of Iceland.
- (3) Valentia Observatory of Meteorological Service.
- (4) Kakioka Magnetic Observatory.
- (5) Telecommunication Training Institute.
- (6) Hermanus Magnetic Observatory.
- (7) Swedish Institute of Space Physics in Kiruna.
- (8) Chambon-la-Forêt Magnetic Observatory.
- (9) Danish Meteorological Institute.
- (10) Institut de Physique du Globe de Strasbourg.
- (11) Indian Institute of Geomagnetism.
- (12) Instituto Geofísico del Perú.

The distribution and the information of the stations are shown in Figure 1 and Table 1, respectively. The Kp index was provided by GeoForschungsZentrum Potsdam. The international sunspot number is provided by the Sunspot Index Data Center, Brussels.

The Post-Script files of these plots for the latest issue are available from WWW home page

<http://swdcd.db.kugi.kyoto-u.ac.jp/>

or from anonymous FTP directory at our data center. The IP address and the directory are as follows:

IP address: 130.54.59.253 (swdcd.db)

Directory: anonymous (Change directory to './data/pplot' after logging in.)

Each file is compressed and has a name YYMMD1-D2.ps.gz ( for example, 990111-12.ps.gz ). Each file contains the plot of the each page of this booklet. Files should be transferred in binary mode and uncompressed.

The users who need further information or the digital data should consult to:

WDC-C2 for Geomagnetism, Kyoto  
 Graduate school of Science,  
 Kyoto University  
 Kyoto 606-8502, Japan.

Telephone: 81-75-753-3929  
 Facsimile: 81-75-722-7884  
 E-mail: iyemori@kugi.kyoto-u.ac.jp  
 WWW: <http://swdcdb.kugi.kyoto-u.ac.jp/>

Table 1. List of stations used in this booklet. The 15 stations among them are used in the plots.

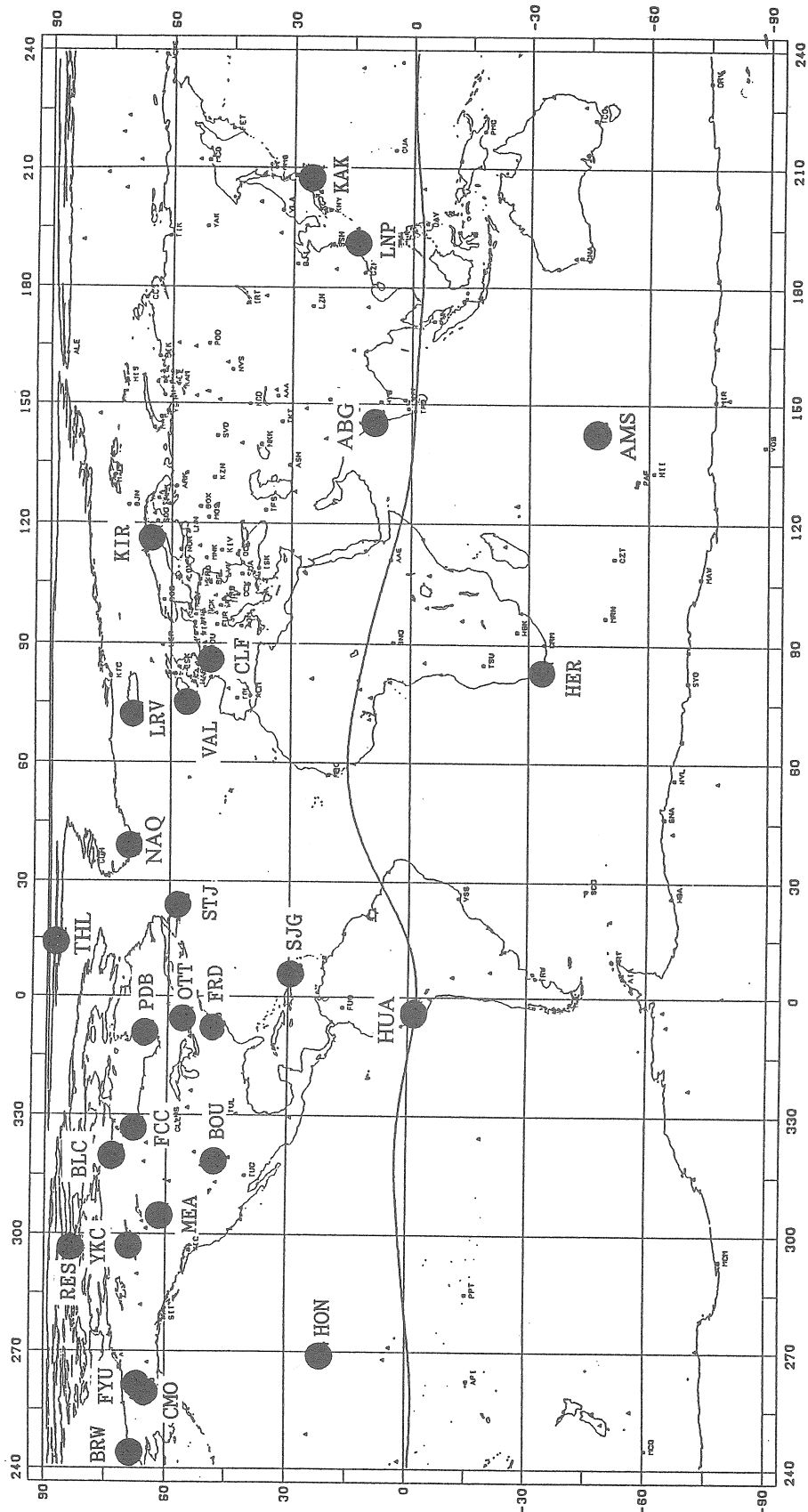
STATION NAME	ABB CODE	ORG No.	GEOGRAPHIC		GEOMAGNETIC		INVARIANT		PLOT SCALE
			LAT.	LONG.	LAT.	LONG.	LAT.		
*Tule	THL	9	76.6	291.2	87.2	12.4	85.9	500nT/div	
*Resolute Bay	RES	1	74.7	265.1	83.1	296.0	83.9	"	
*Baker Lake	BLC	1	64.3	264.0	73.7	319.2	74.6	"	
*Narssarsuaq	NAQ	9	61.2	314.6	70.6	38.7	67.5	"	
Leirvogur	LRV	2	64.2	338.3	69.7	72.0	65.7	"	
*Yellowknife	YKC	1	62.5	245.5	69.1	296.6	69.8	"	
*Barrow	BRW	1	71.3	203.3	69.1	243.7	69.6	"	
*Fort Churchill	FCC	1	58.8	265.9	68.5	326.1	69.6	"	
*Pos. de la Baleine	PDB	1	55.3	282.3	66.2	350.3	66.8	"	
Kiruna	KIR	7	67.8	20.4	65.1	116.2	64.5	"	
*College	CMO	1	64.9	212.2	65.1	259.2	64.8	"	
*St. Johns	STJ	1	47.6	307.3	57.9	23.4	55.6	100nT/div	
Valentia	VAL	3	51.9	349.8	56.2	74.8	51.0	"	
*San Juan	SJG	1	18.4	293.9	29.1	5.2	32.5	"	
*Fredericksburg	FRD	1	38.2	282.6	49.1	352.2	50.7	"	
*Boulder	BOU	1	40.1	254.8	48.7	319.0	49.1	"	
*Honolulu	HON	1	21.3	202.0	21.5	268.6	20.2	"	
Kakioka	KAK	4	36.2	140.2	26.6	207.8	25.9	"	
Lunping	LNP	5	25.0	121.2	14.2	191.3	7.6	"	
Martin de Vivies	AMS	10	-37.8	77.6	-46.9	142.8	48.6	"	
Chambon-la-Foret	CLF	8	48.0	2.3	50.1	85.7	45.7	"	
Hermanus	HER	6	-34.4	19.2	-33.7	82.7	43.6	"	
*Alibag	ABG	11	18.6	72.9	9.9	145.8	---	"	
Huancayo	HUA	12	-12.1	284.7	-1.4	356.2	Mag. Equator	"	

\*: Provisional data

#### Acknowledgments:

The compilation of the geomagnetic data and publication of this booklet have been supported in part by grant 11694072 and 403002 under the Japan Society for Promotion of science (JSPS).

# DISTRIBUTION OF GEOMAGNETIC OBSERVATORIES



GEOMAGNETIC COORDINATE (1985.0)

— DIP EQUATOR AT 100 KM ALTITUDE

Fig.1 Data are obtained at the observatories shown by the solid circles.  
15 stations among those shown in this figure are used for the plots.

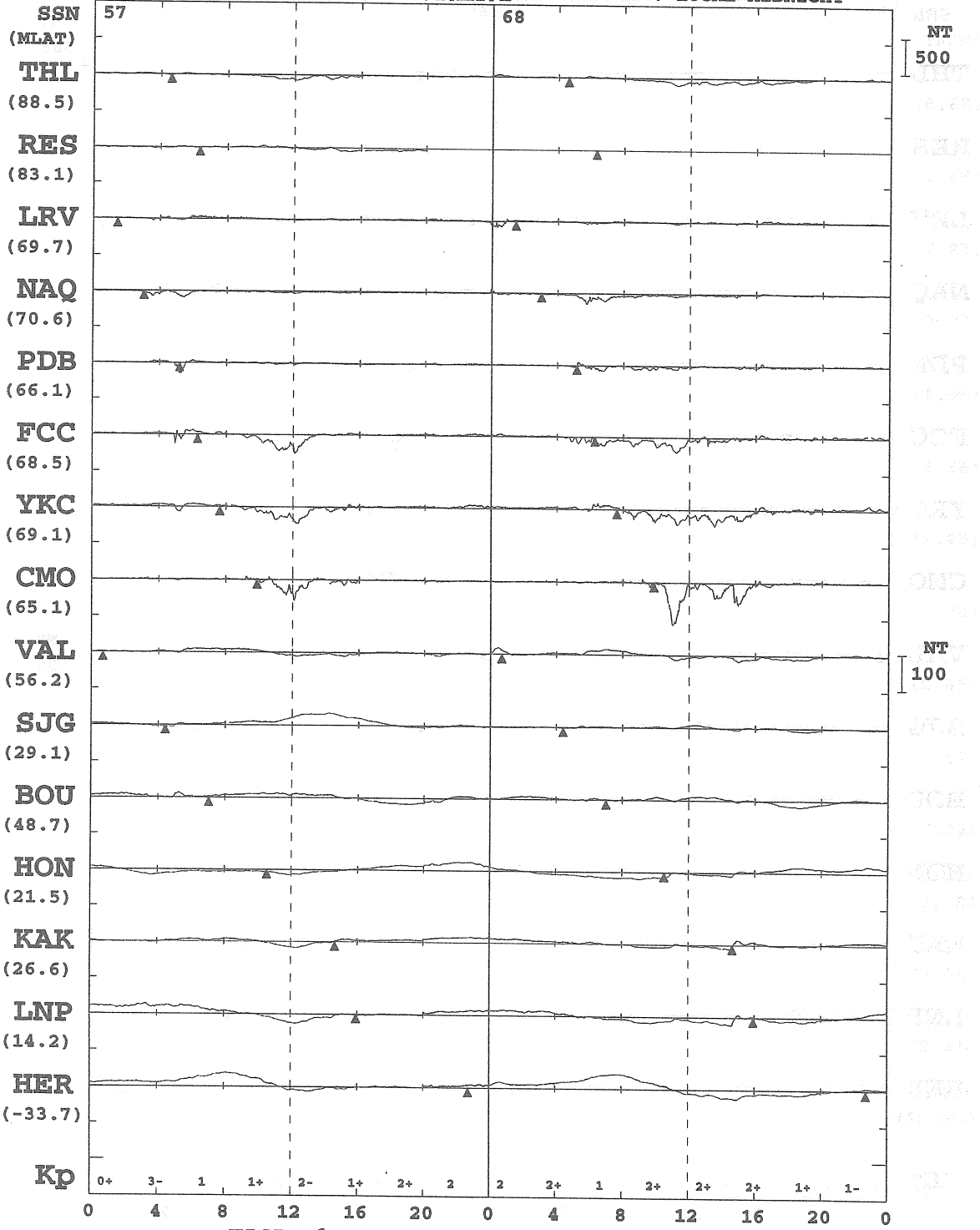




January - June, 1999



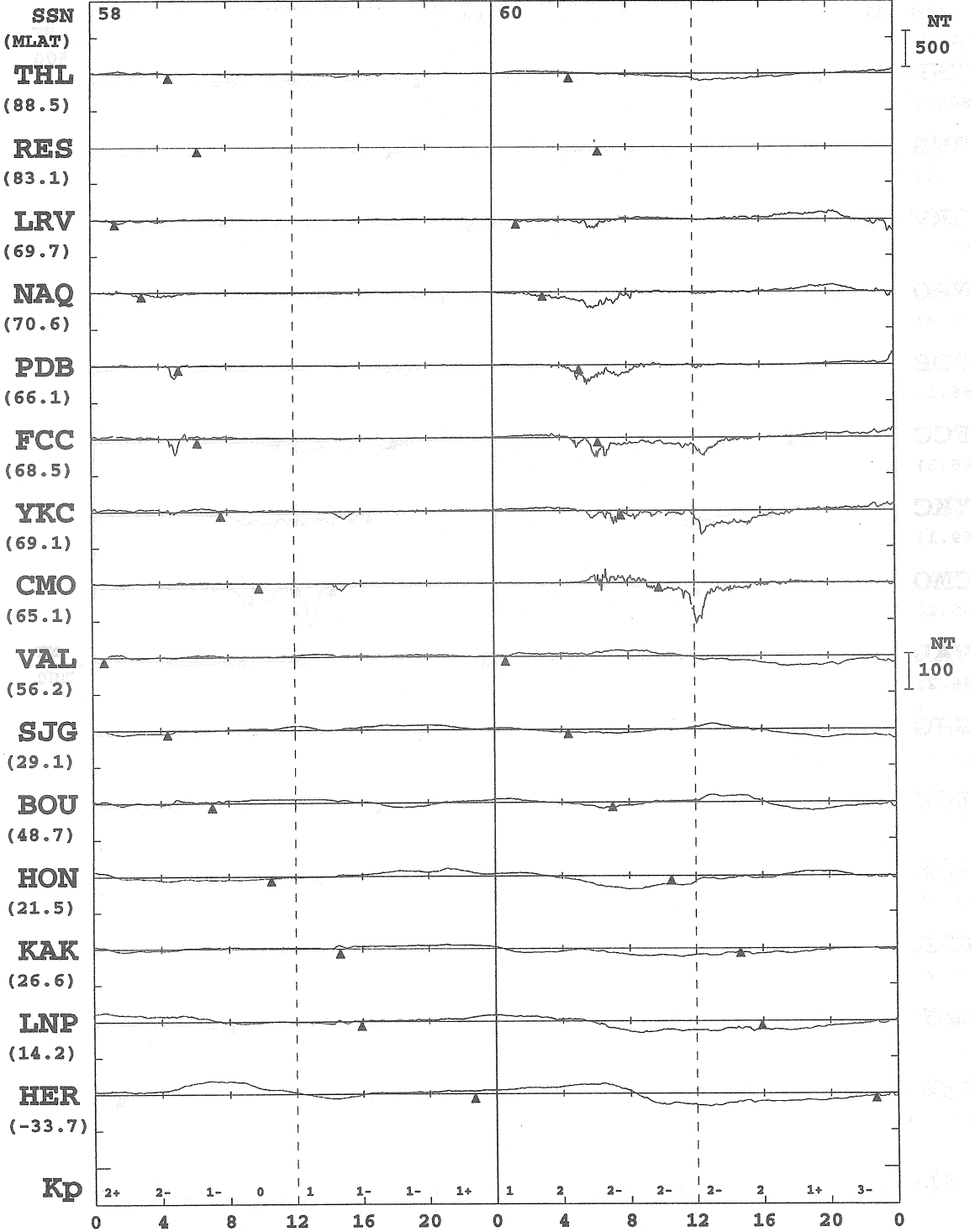
1999 H OR X-COMPONENT  $\Delta$ : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH  
 KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

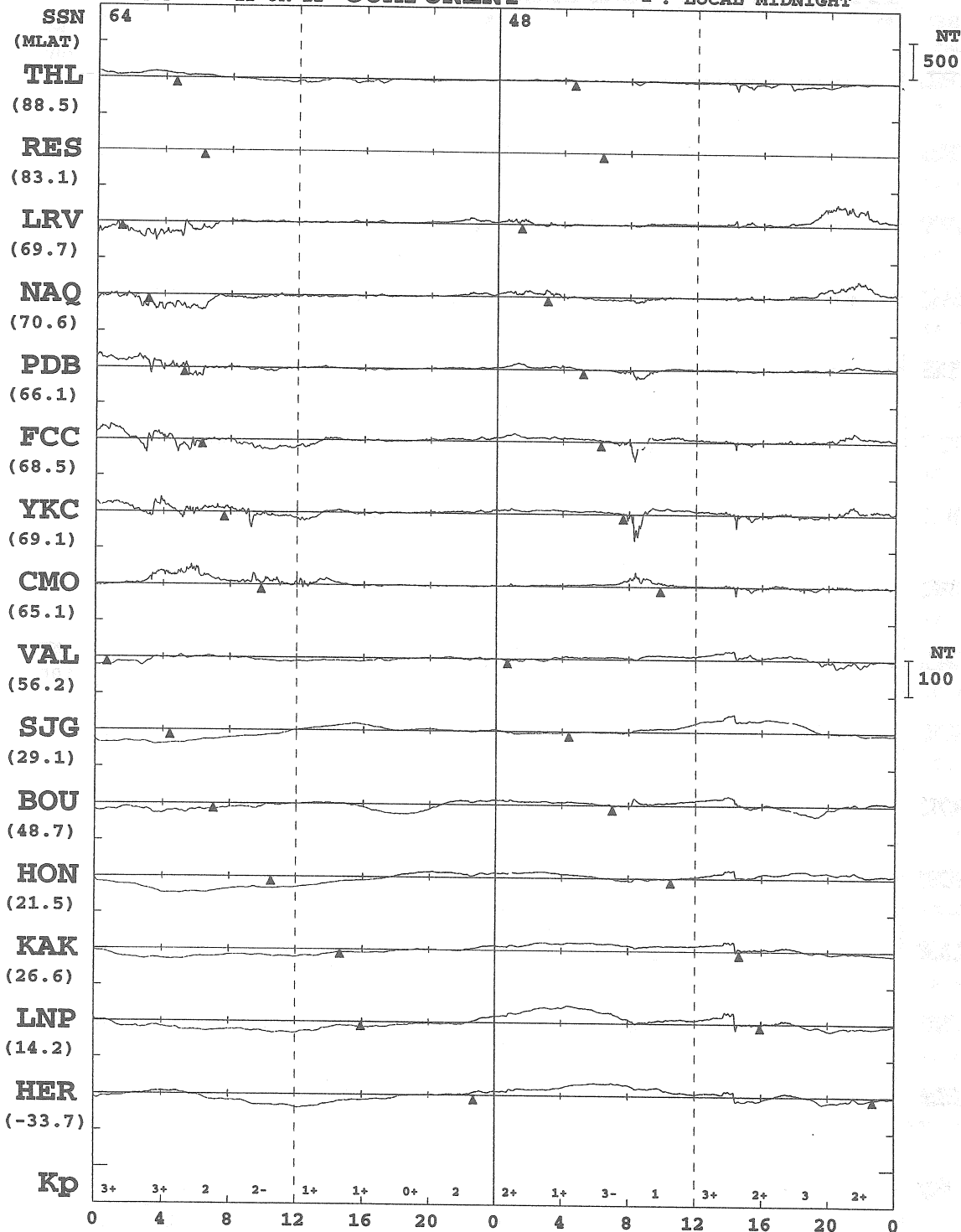


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

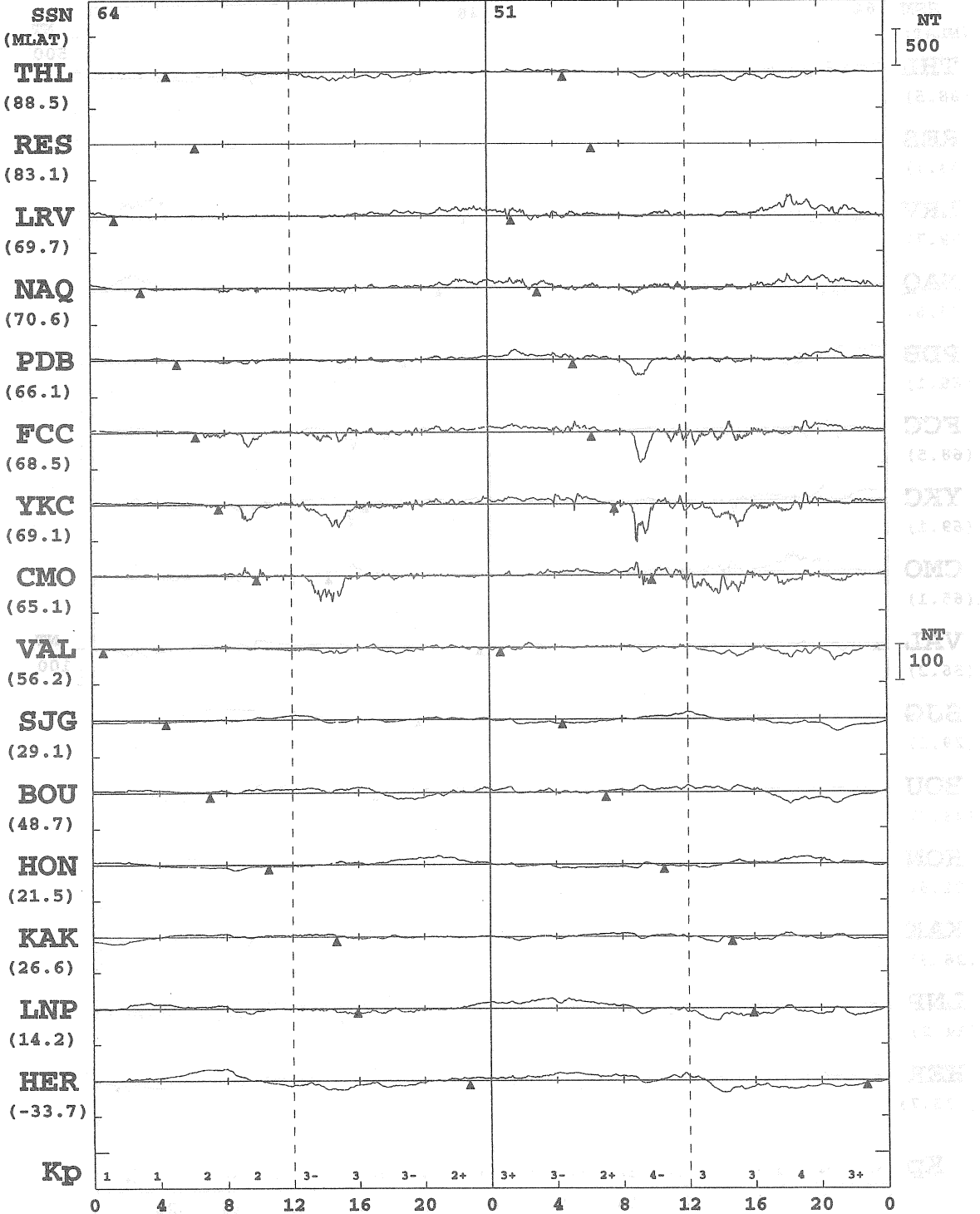
▲ : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT

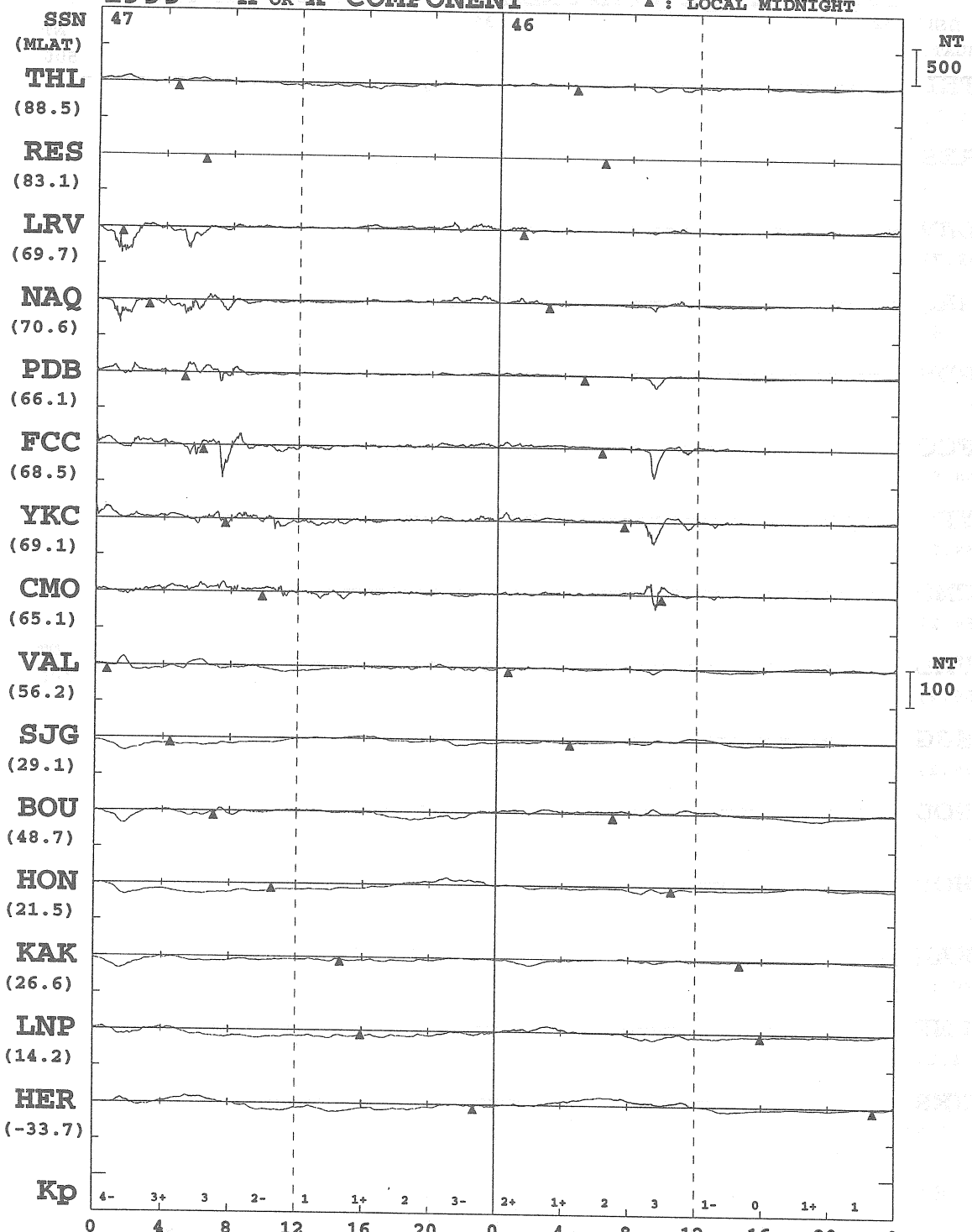


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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# 1999 H OR X-COMPONENT

△ : LOCAL MIDNIGHT



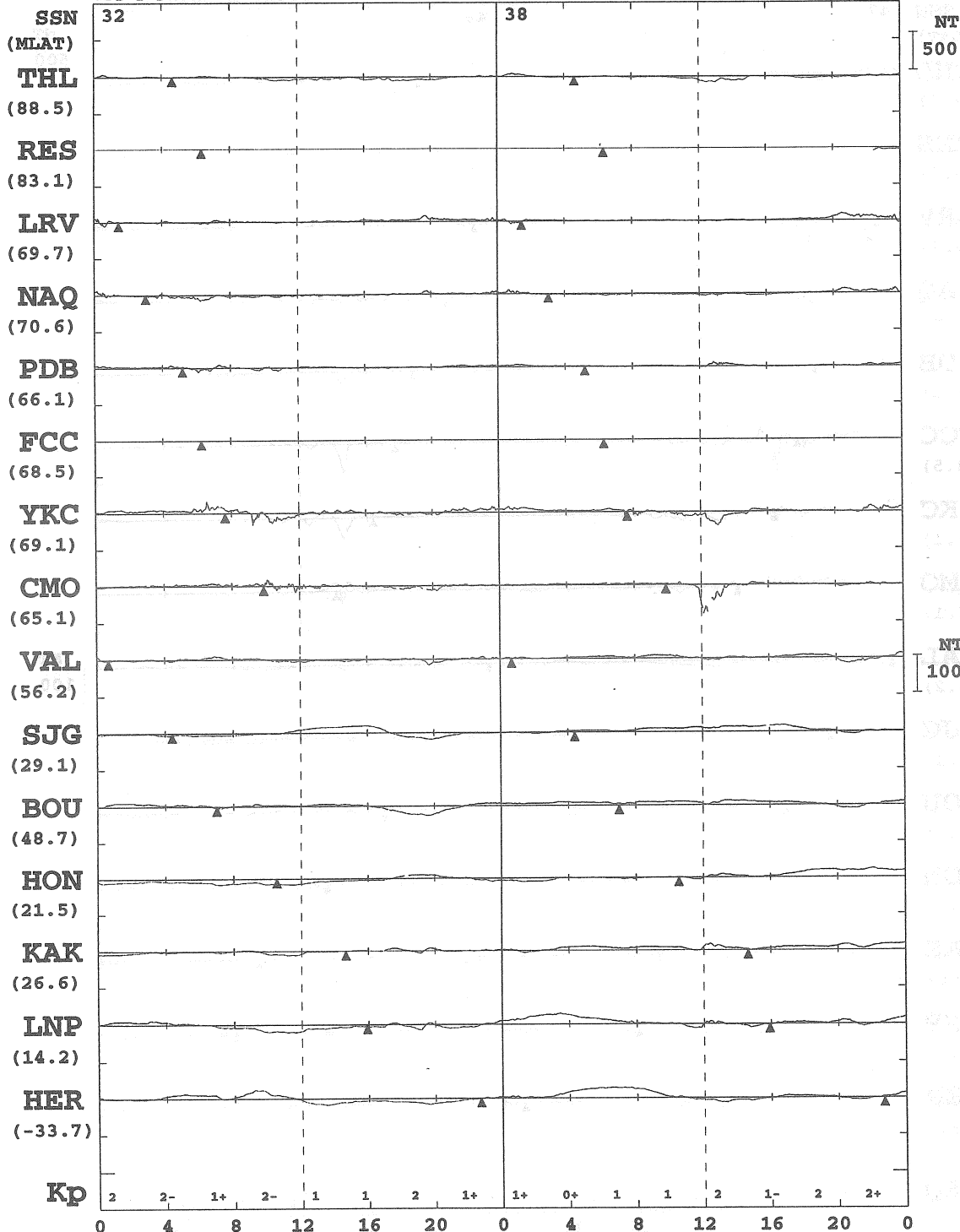
JAN 9  
(DAY 9)

JAN 10  
(DAY 10)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



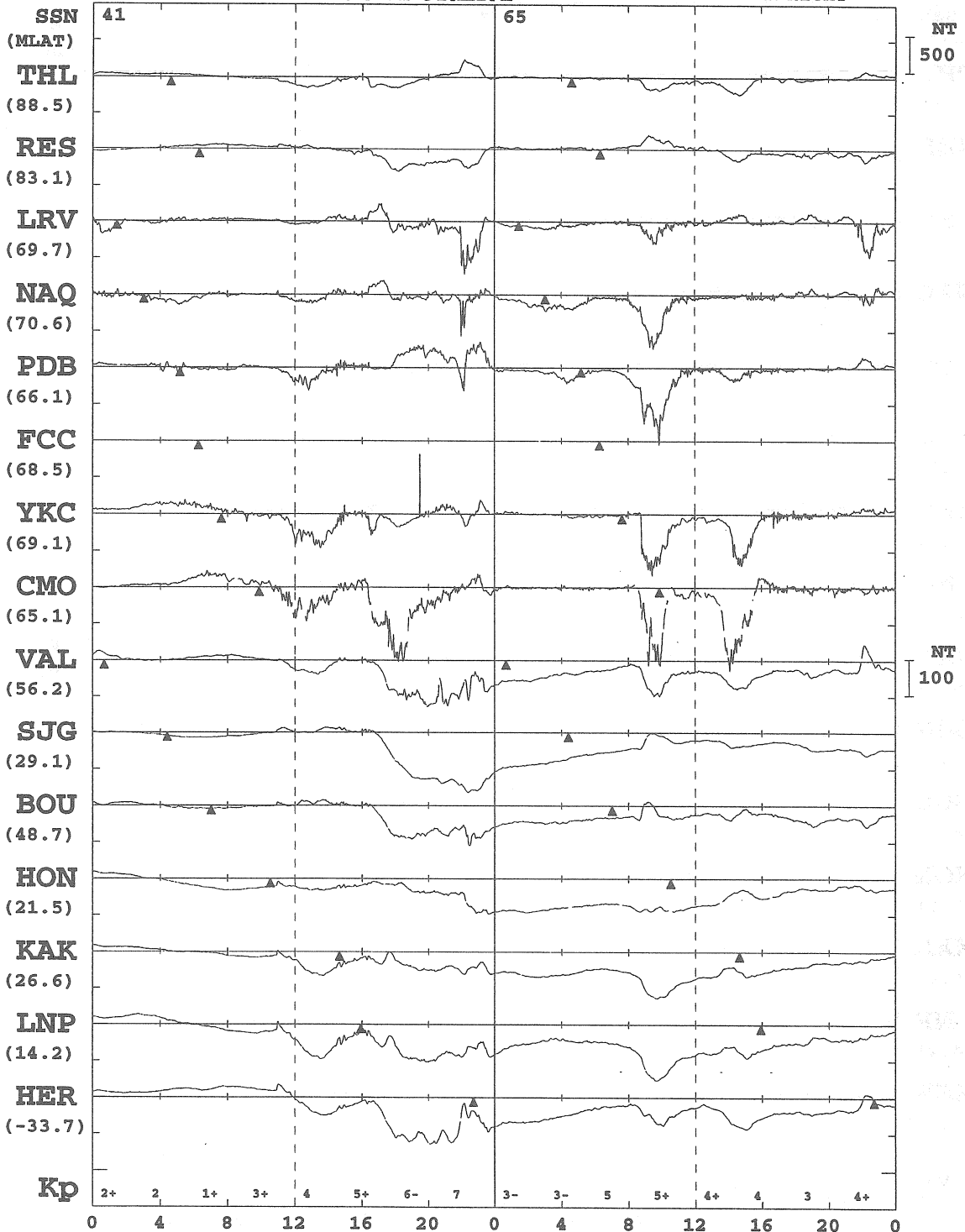
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



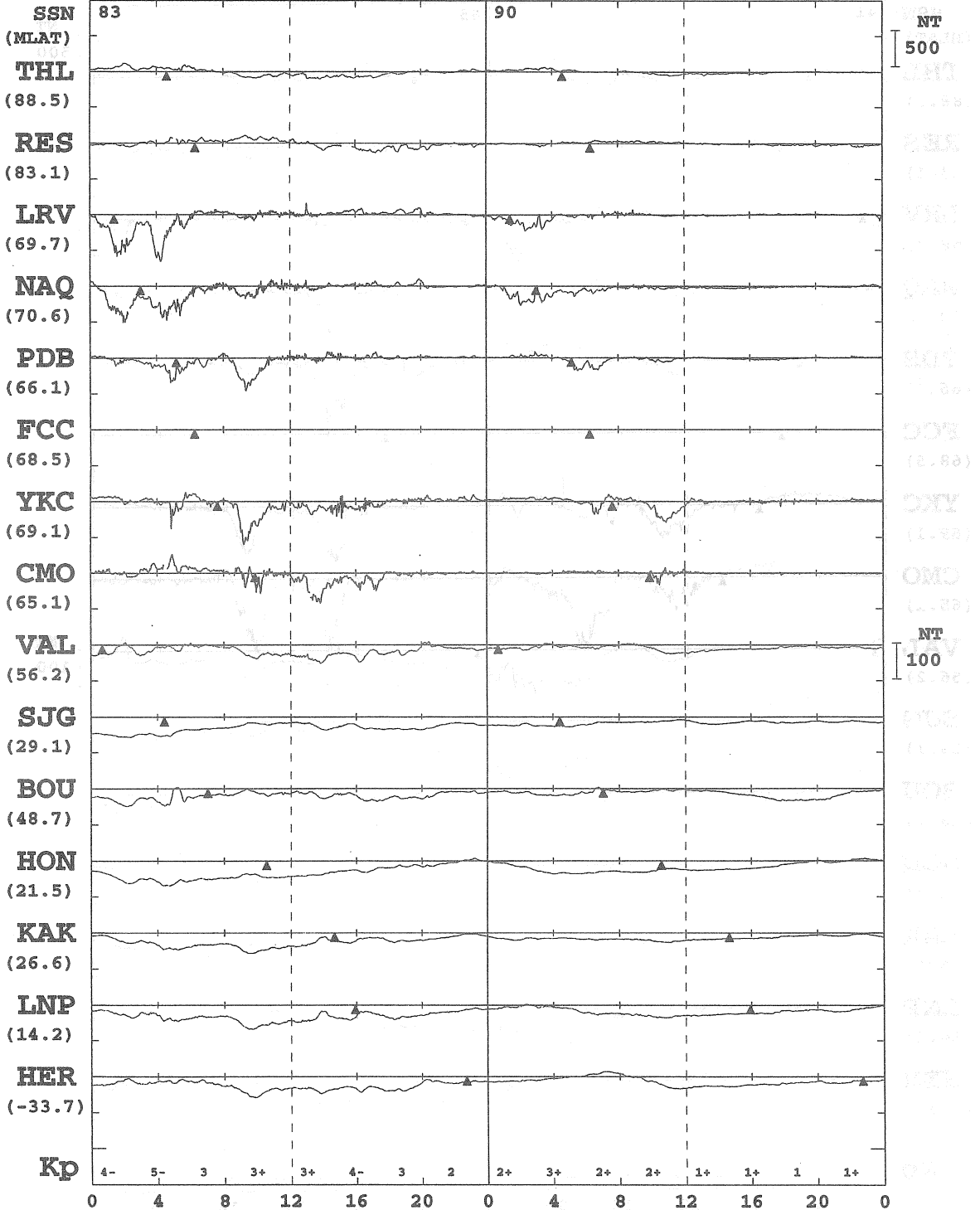
JAN 13  
(DAY 13)

JAN 14  
(DAY 14)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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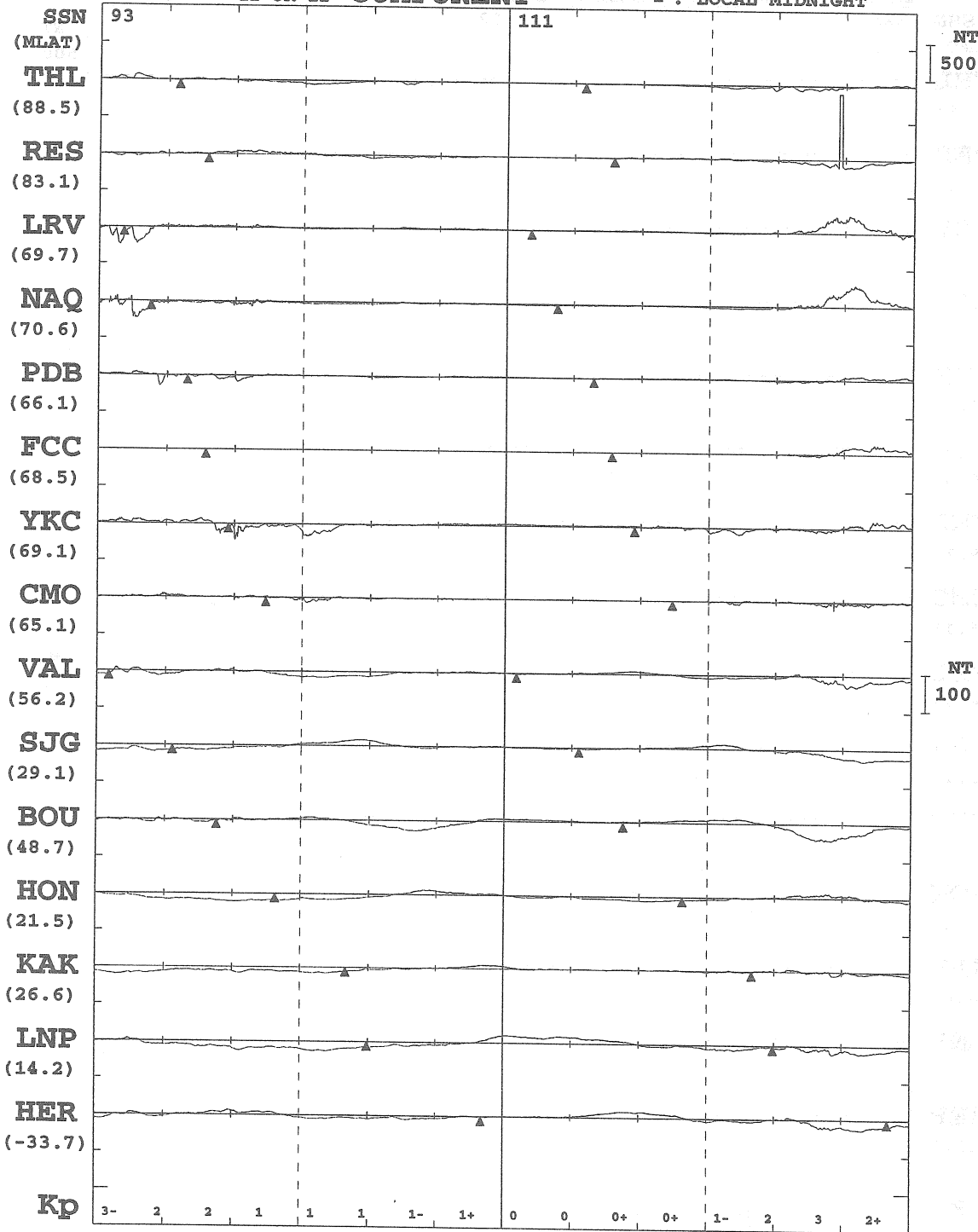
1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



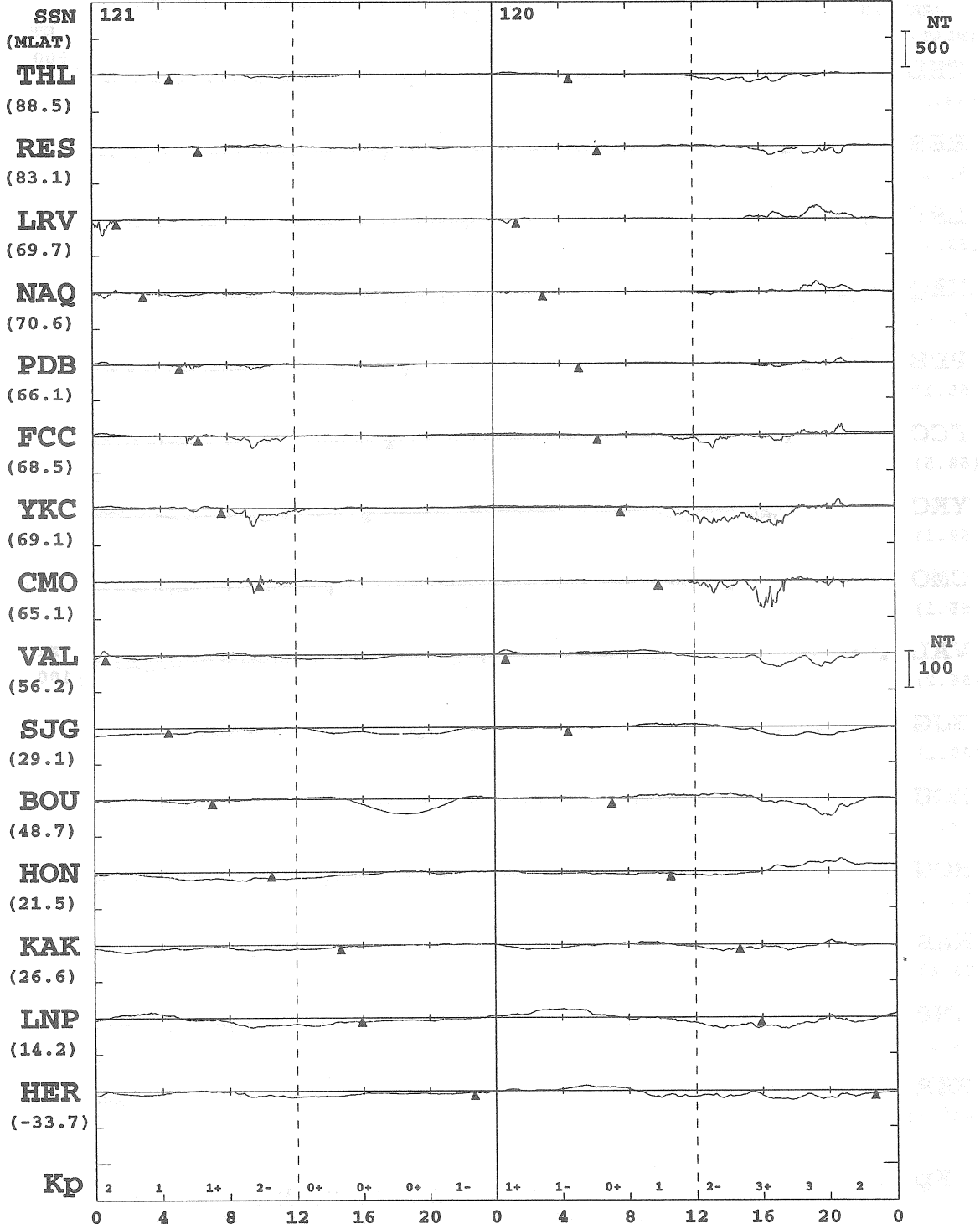
JAN 17  
(DAY 17)

JAN 18  
(DAY 18)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



JAN 19  
(DAY 19)

JAN 20  
(DAY 20)

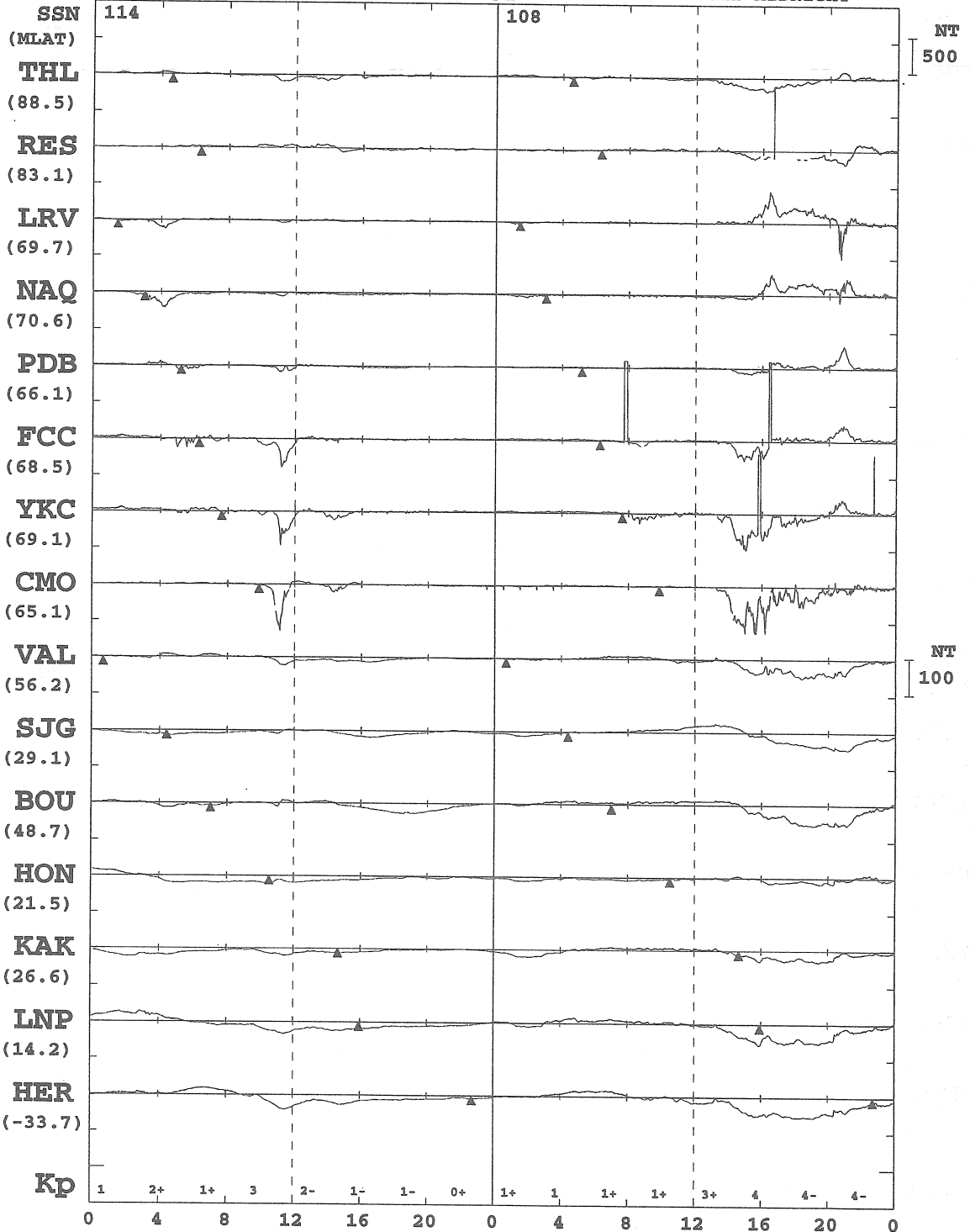
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999

H OR X-COMPONENT

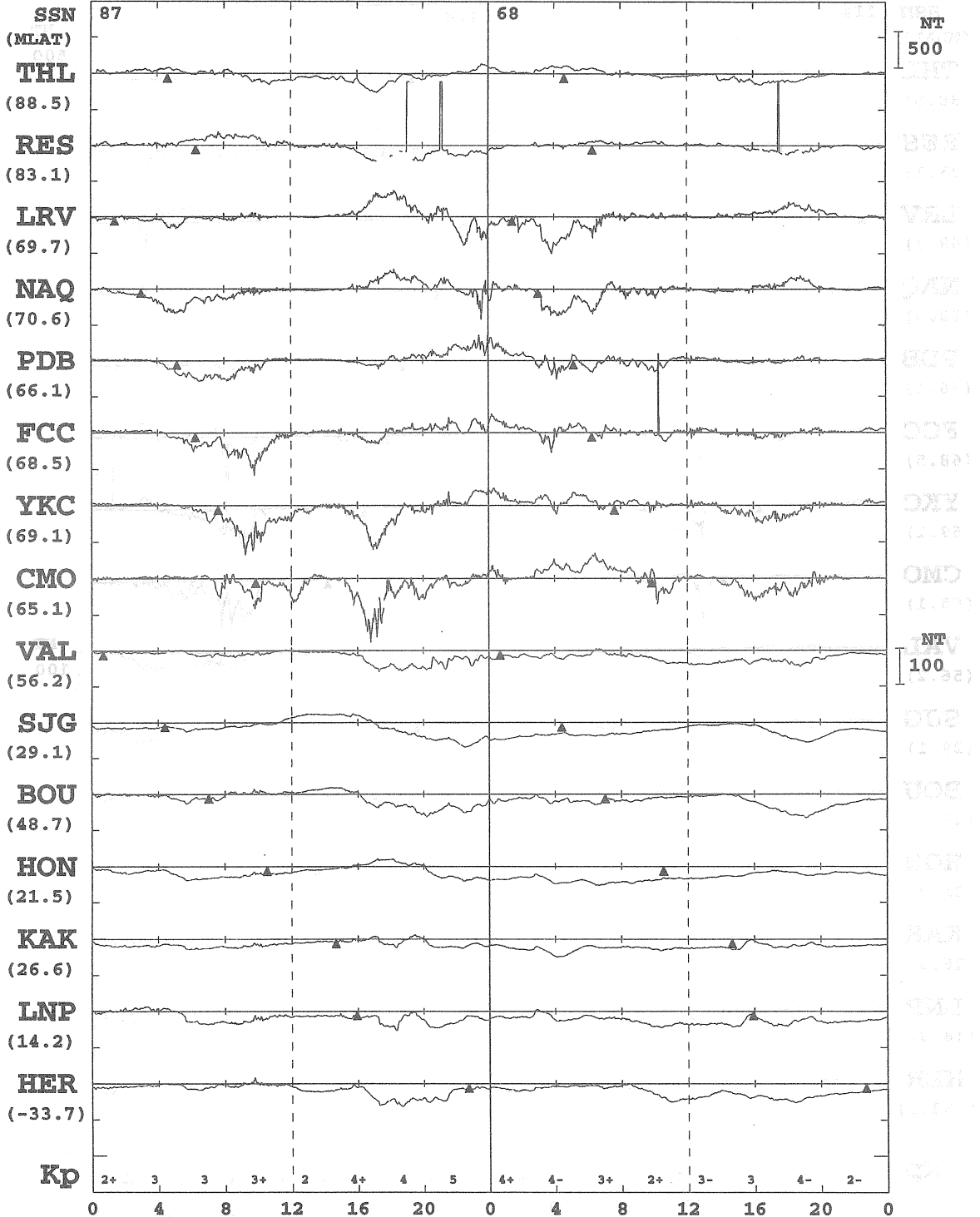
▲ : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT LOCAL MIDNIGHT



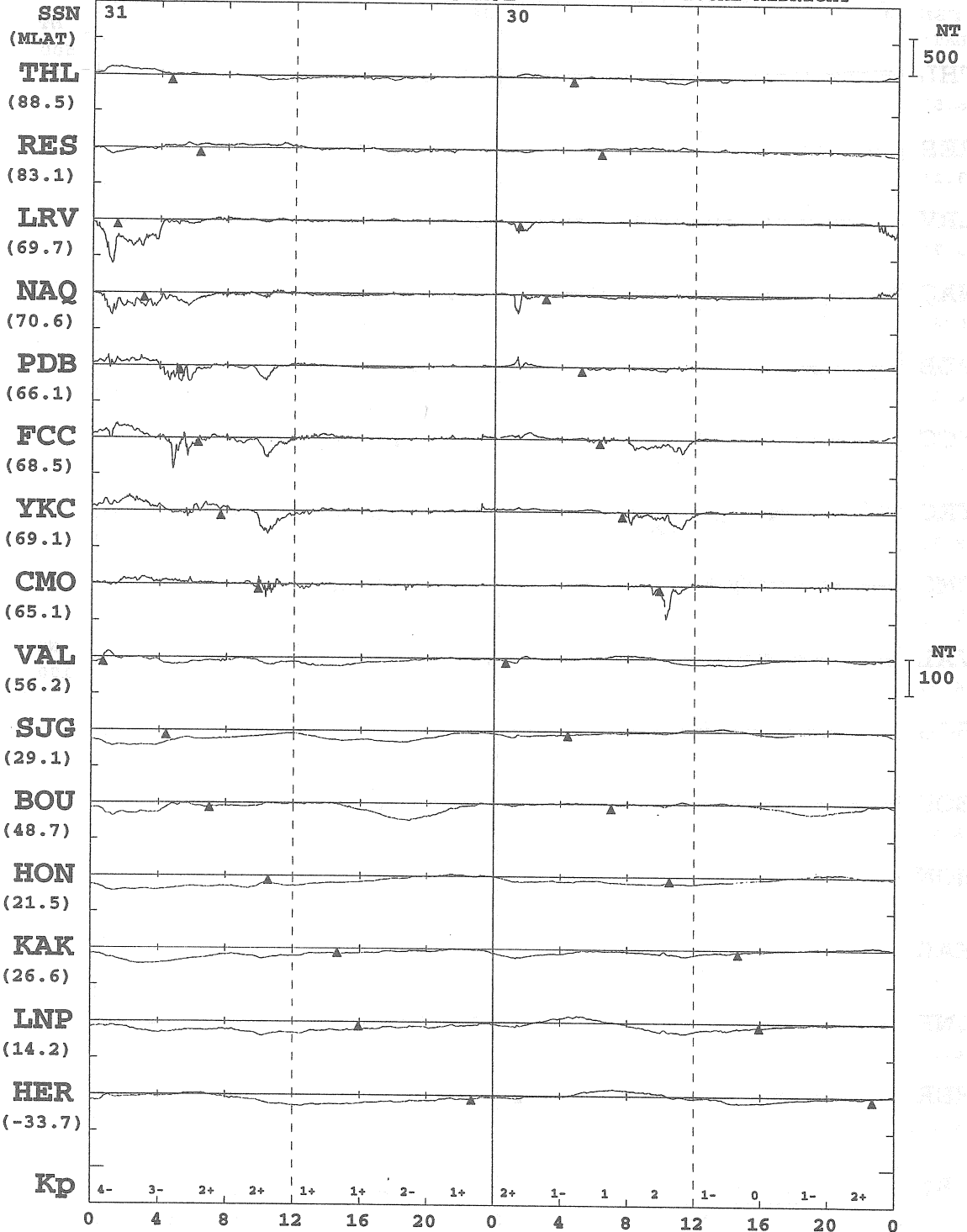
JAN 23  
(DAY 23)

JAN 24  
(DAY 24)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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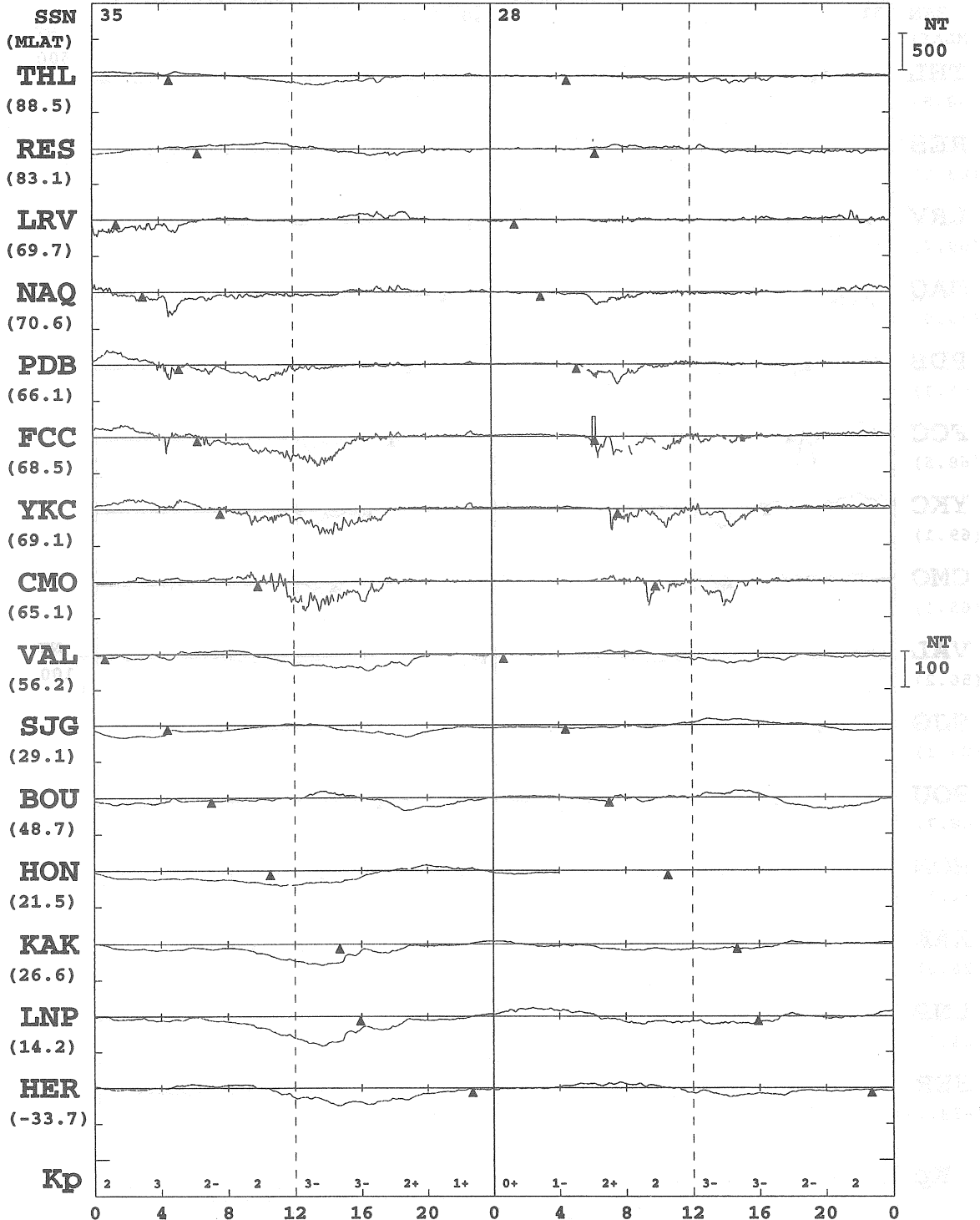
1999 H OR X-COMPONENT LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT

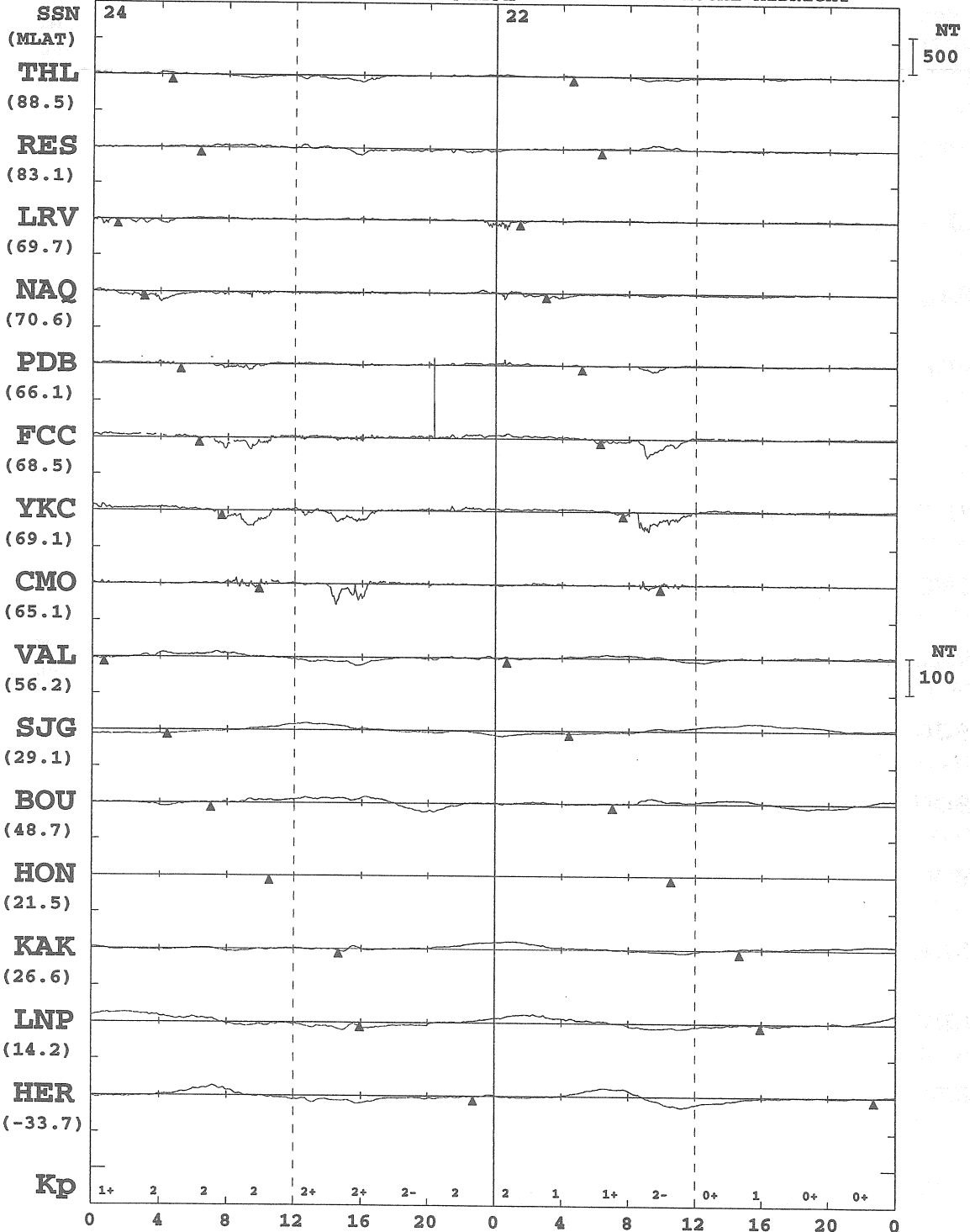


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



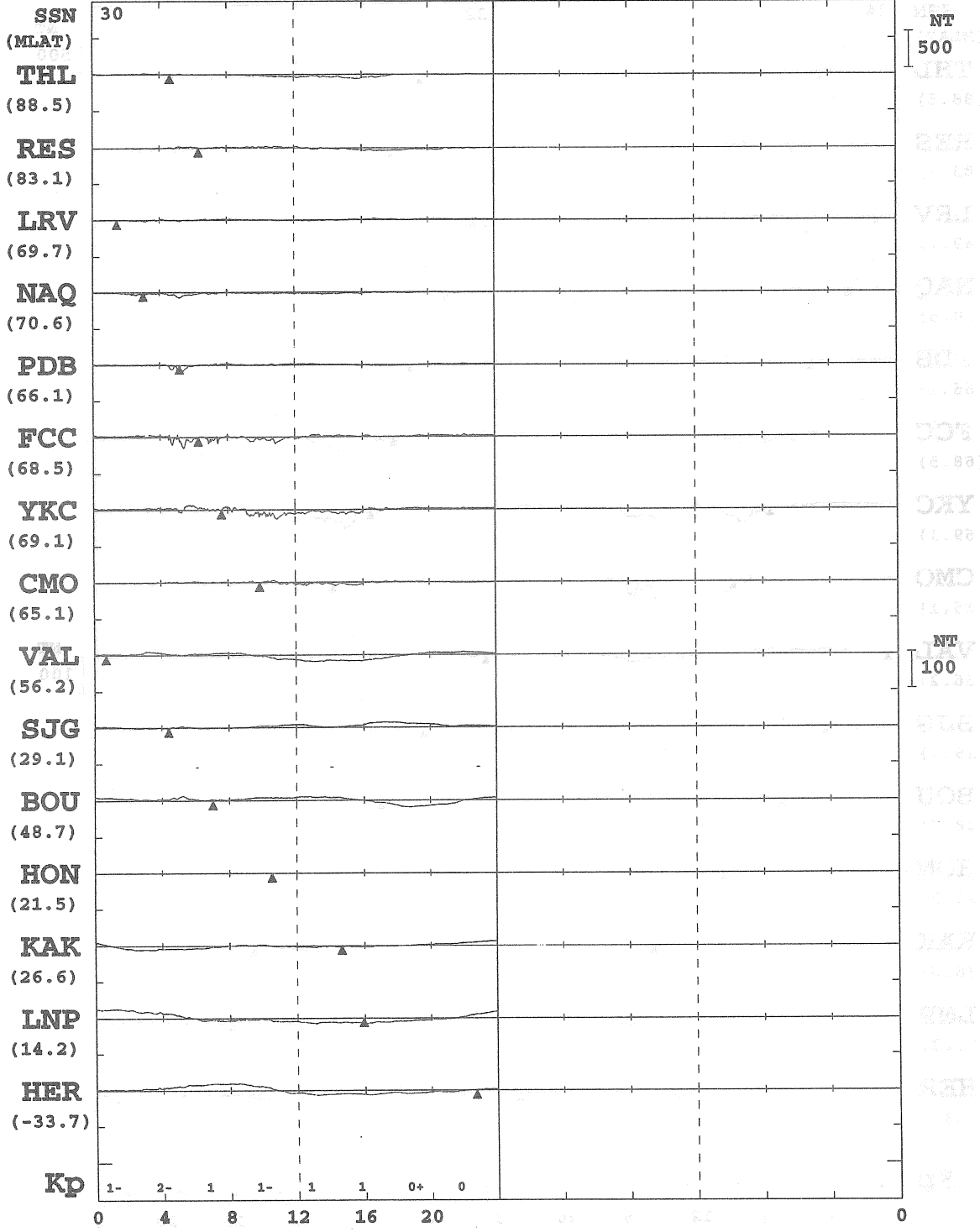
JAN 29  
(DAY 29)

JAN 30  
(DAY 30)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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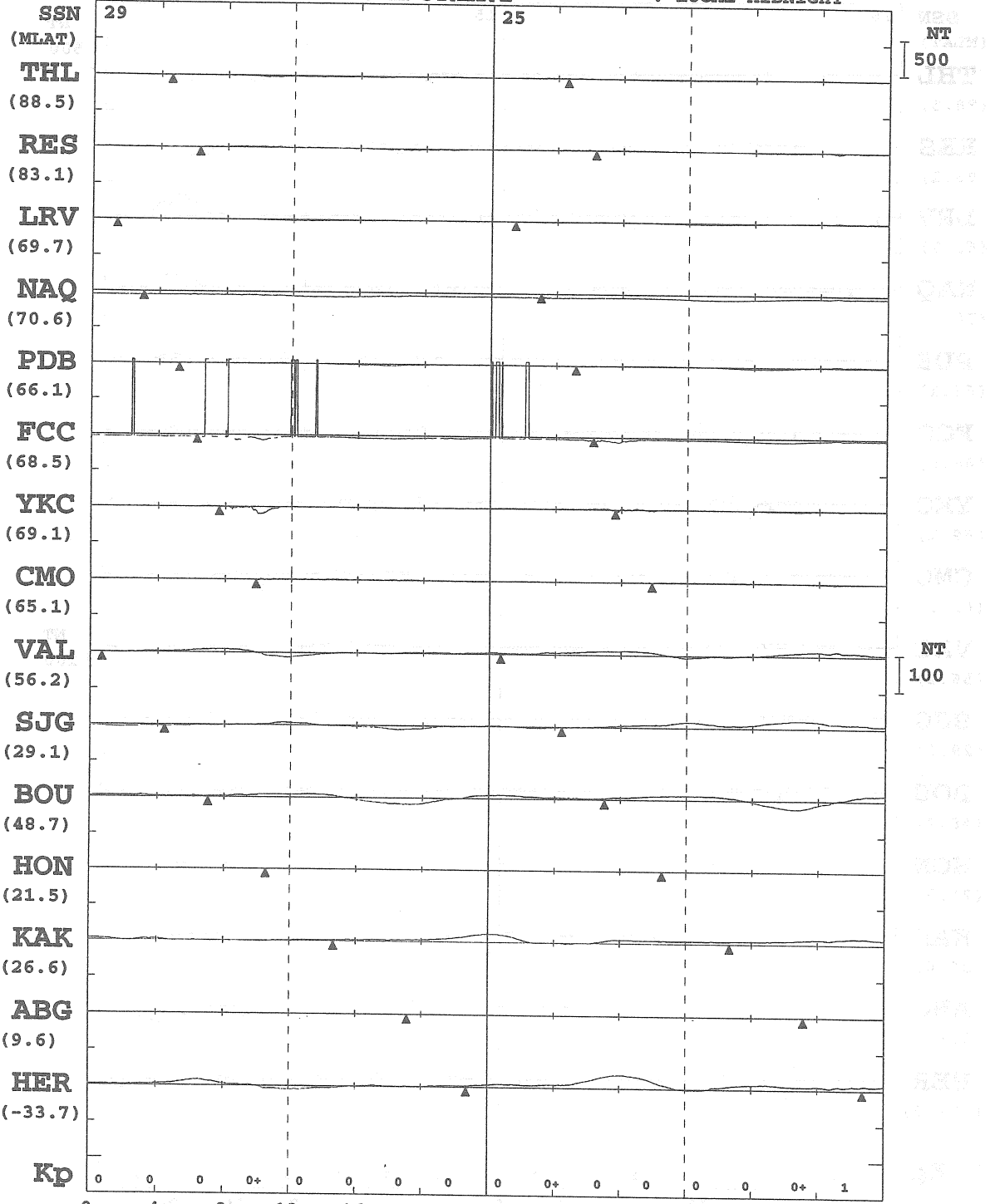
1999 H OR X-COMPONENT LOCAL MIDNIGHT



JAN 31  
(DAY 31)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED.  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

1999 H OR X-COMPONENT  $\Delta$ : LOCAL MIDNIGHT



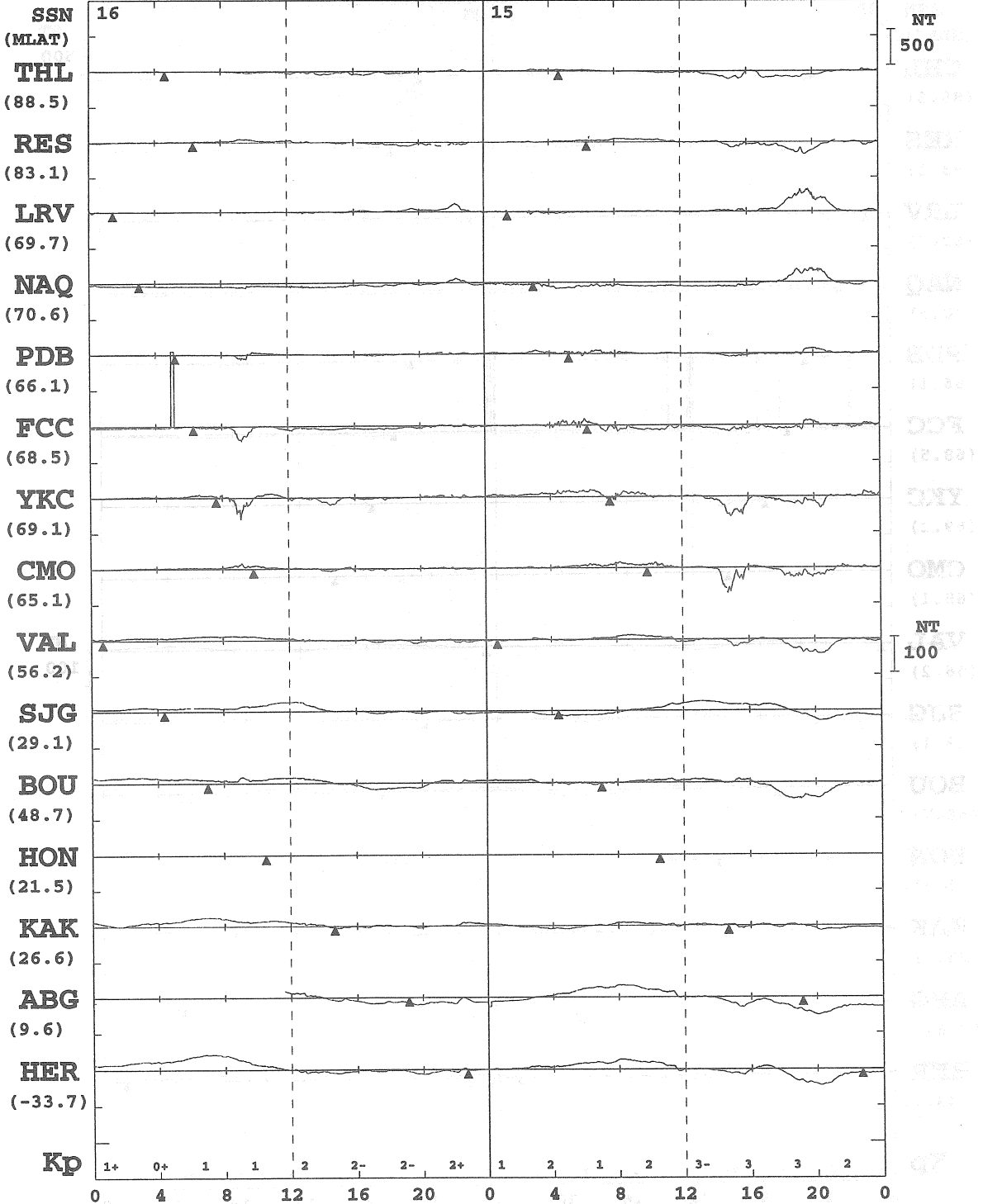
FEB 1  
(DAY 32)

FEB 2  
(DAY 33)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

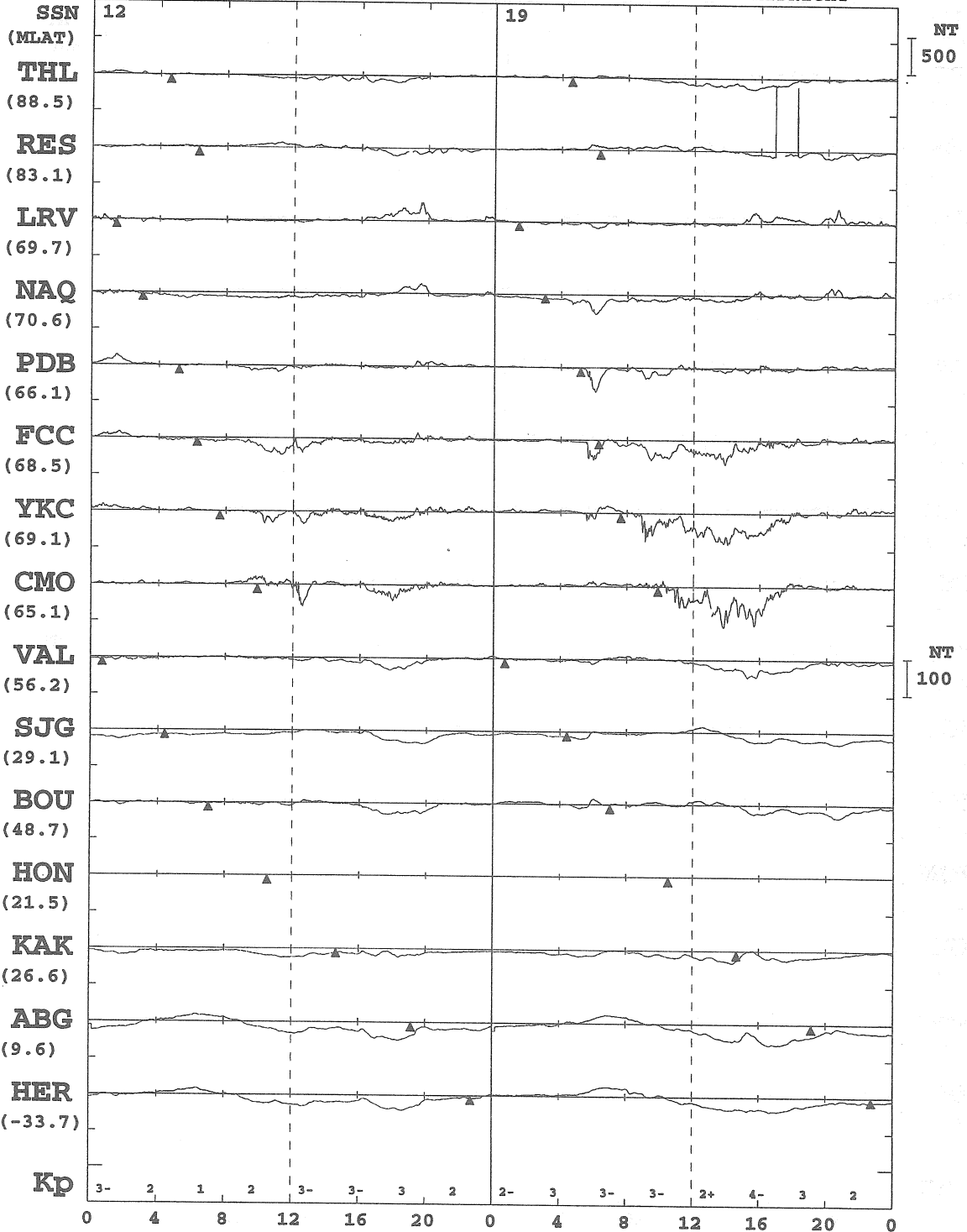


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



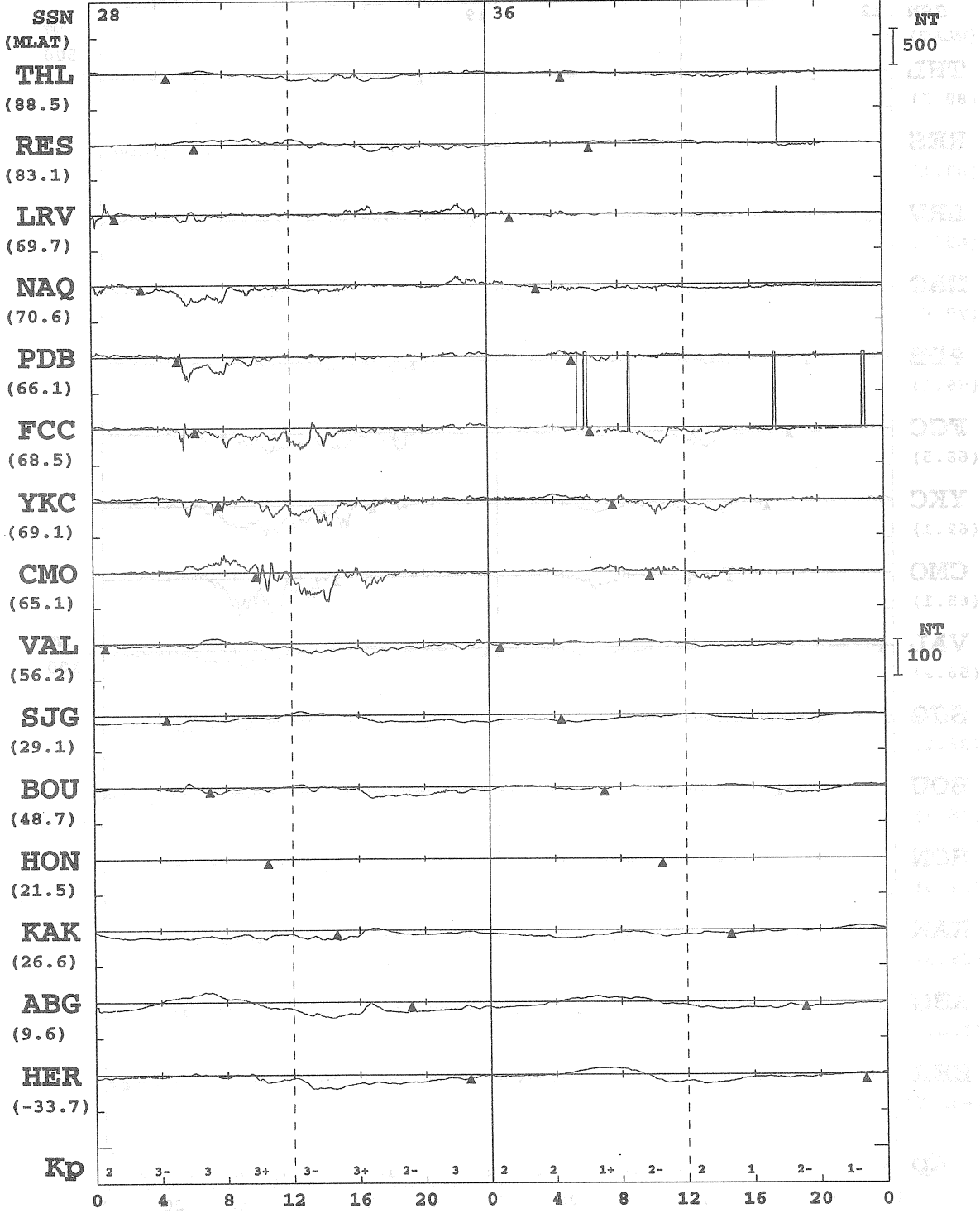
**FEB 5  
(DAY 36)**

**FEB 6  
(DAY 37)**

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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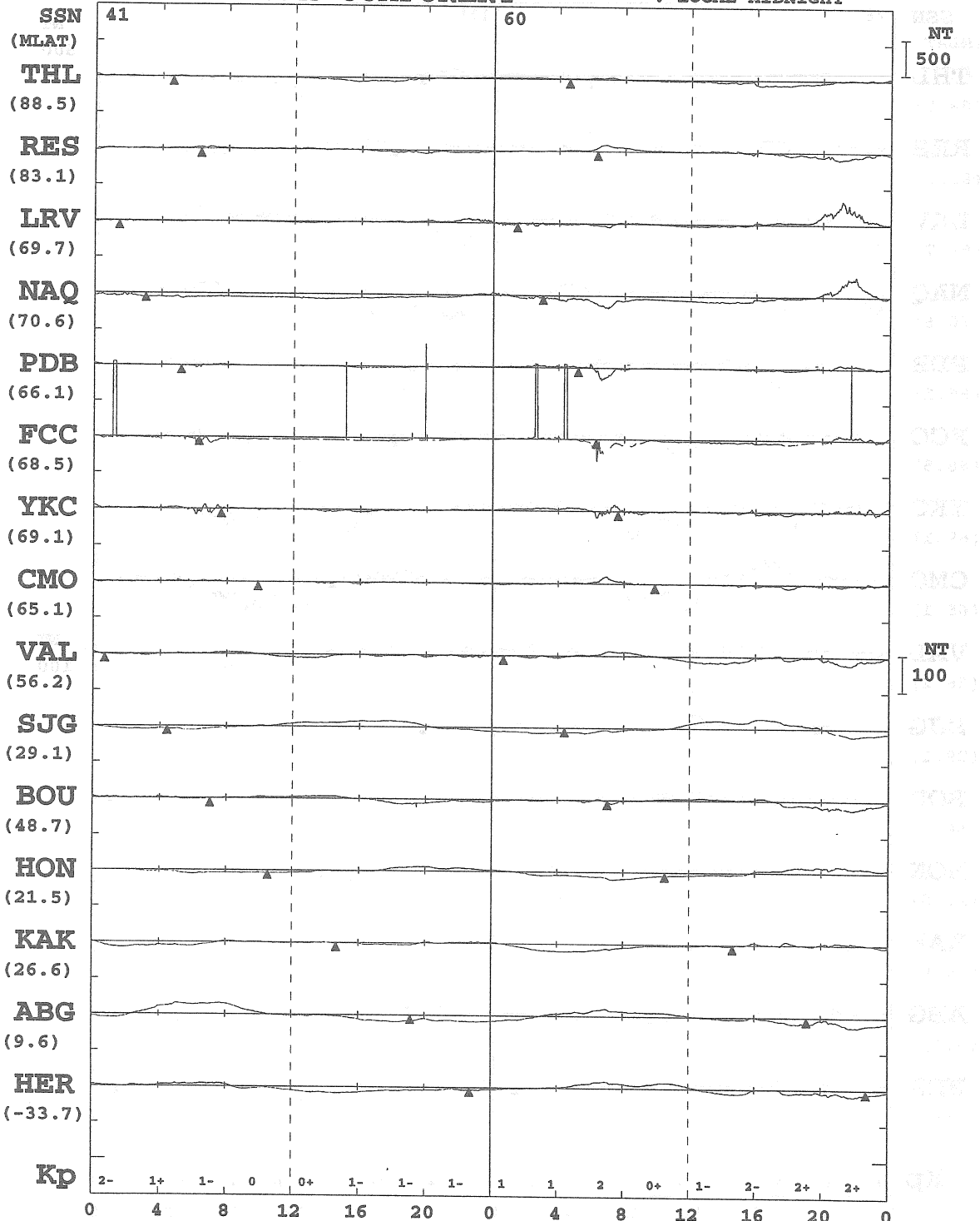
1999 H OR X-COMPONENT LOCAL MIDNIGHT



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 \* PROMPT DATA ARE INCLUDED  
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# 1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

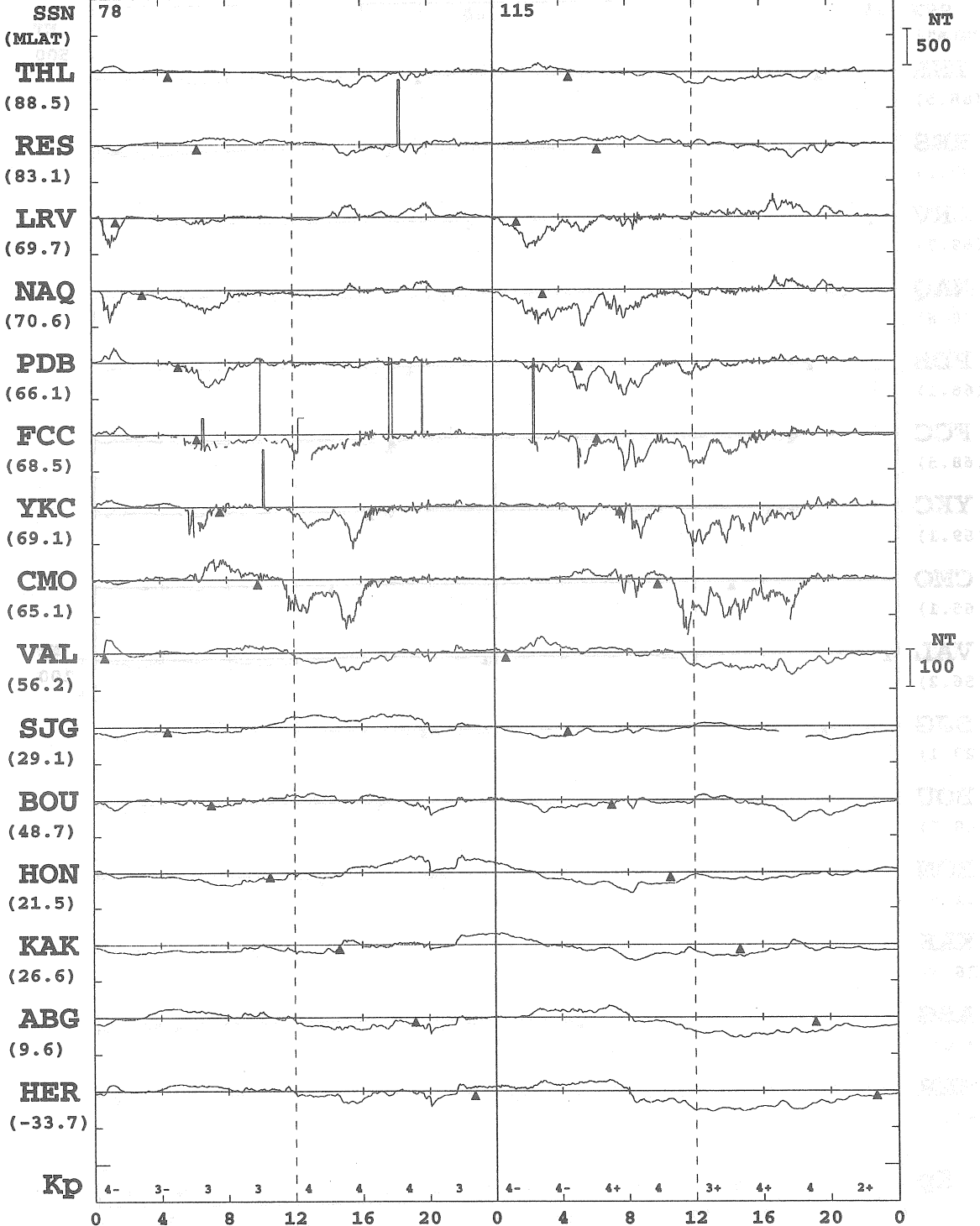


**FEB 9**  
(DAY 40)
**FEB 10**  
(DAY 41)

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1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



FEB 11  
(DAY 42)

FEB 12  
(DAY 43)

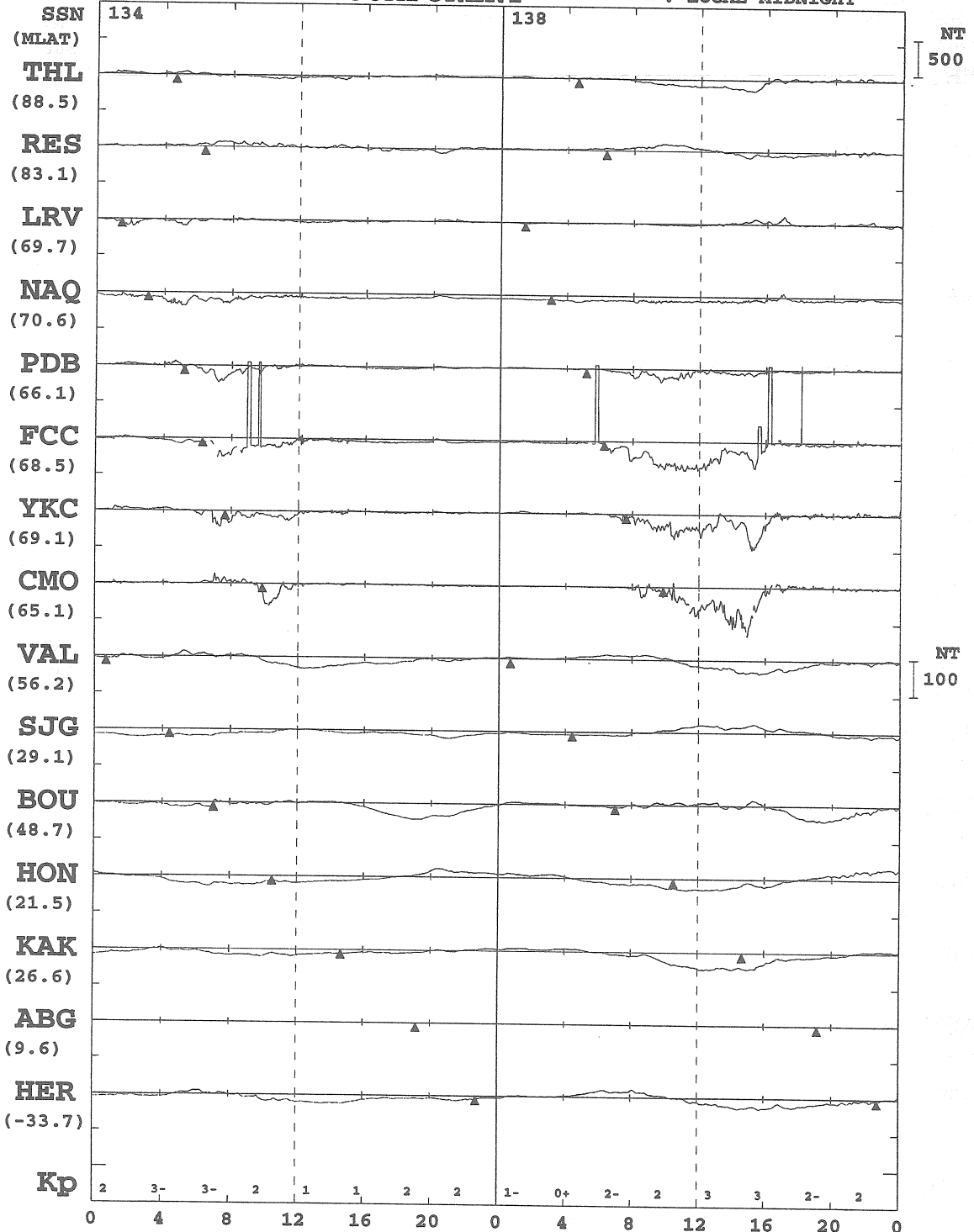
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



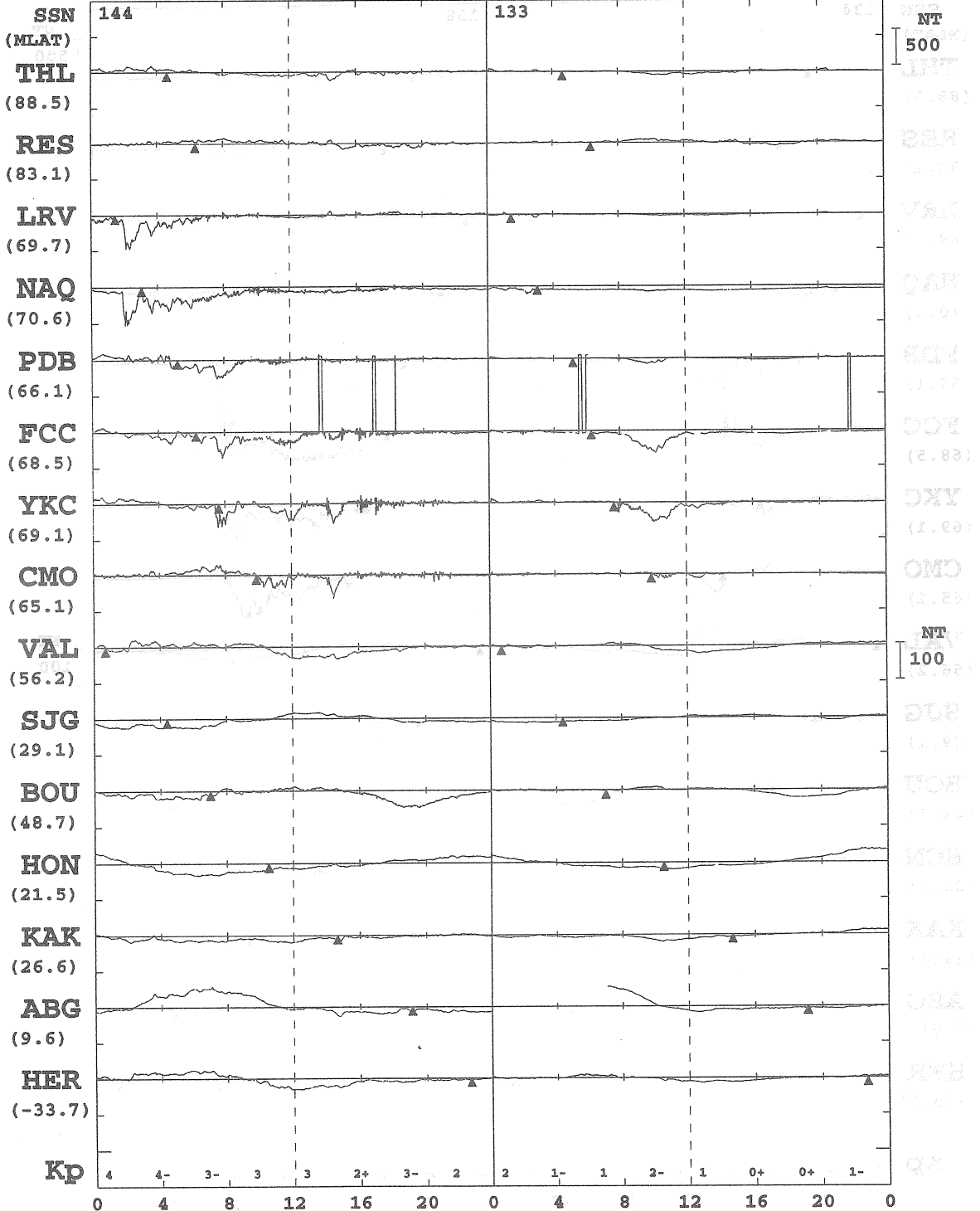
**FEB 13**  
(DAY 44)

**FEB 14**  
(DAY 45)

- \* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
- \* PROMPT DATA ARE INCLUDED
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1999 H OR X-COMPONENT LOCAL MIDNIGHT

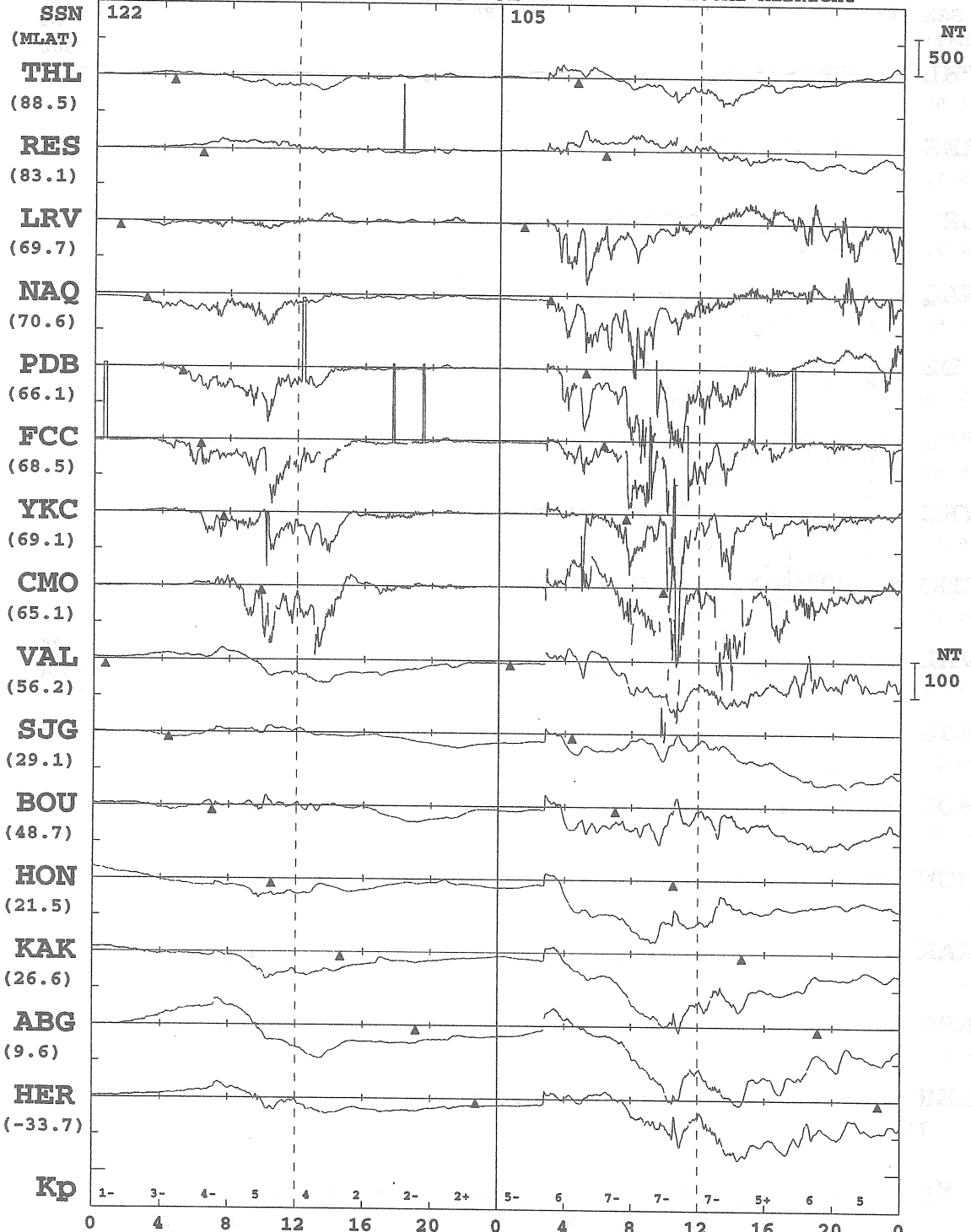


FEB 15  
(DAY 46)

FEB 16  
(DAY 47)

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# 1999 H or X-COMPONENT ▲ : LOCAL MIDNIGHT



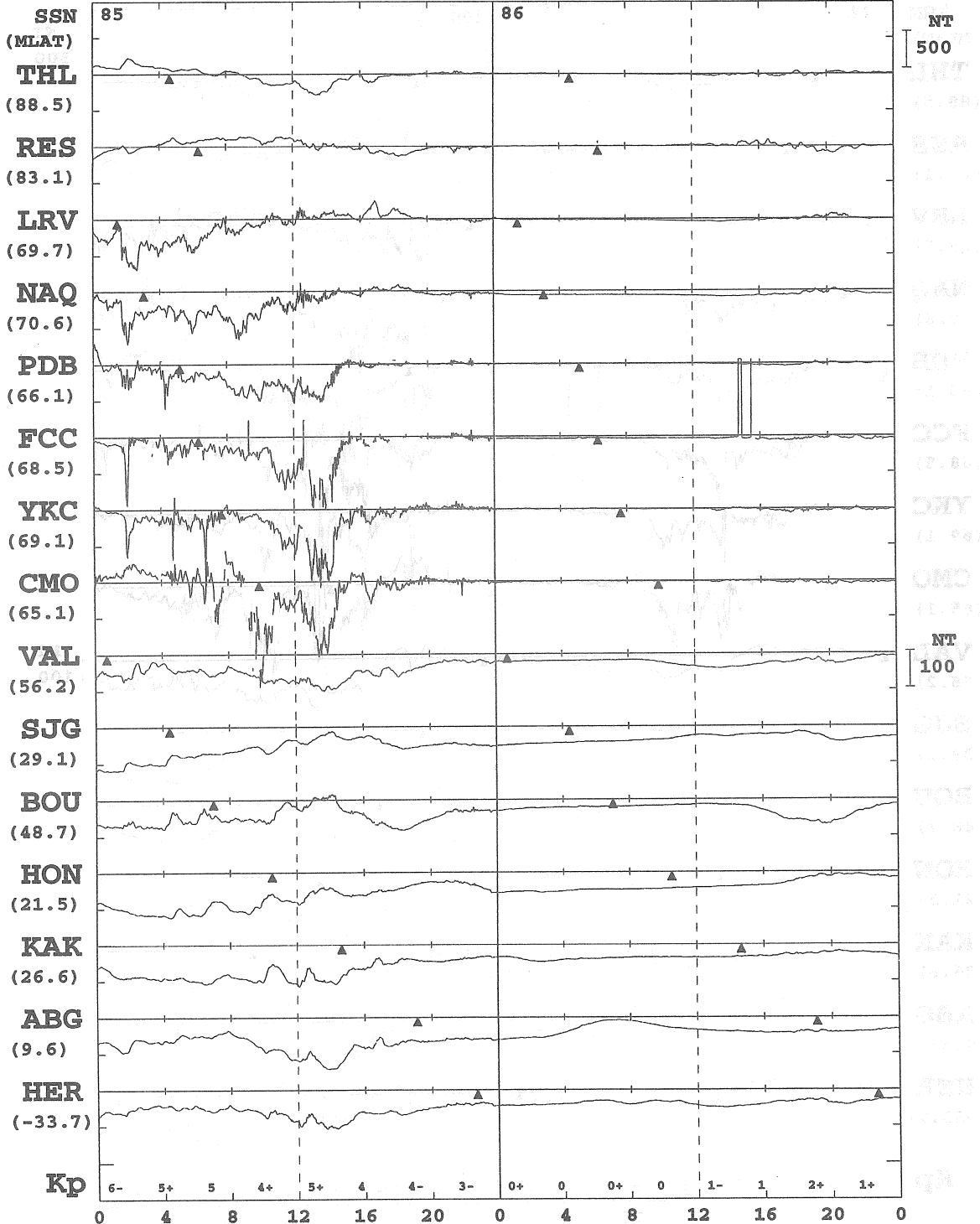
**FEB 17  
(DAY 48)**

**FEB 18  
(DAY 49)**

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



**FEB 19**  
(DAY 50)

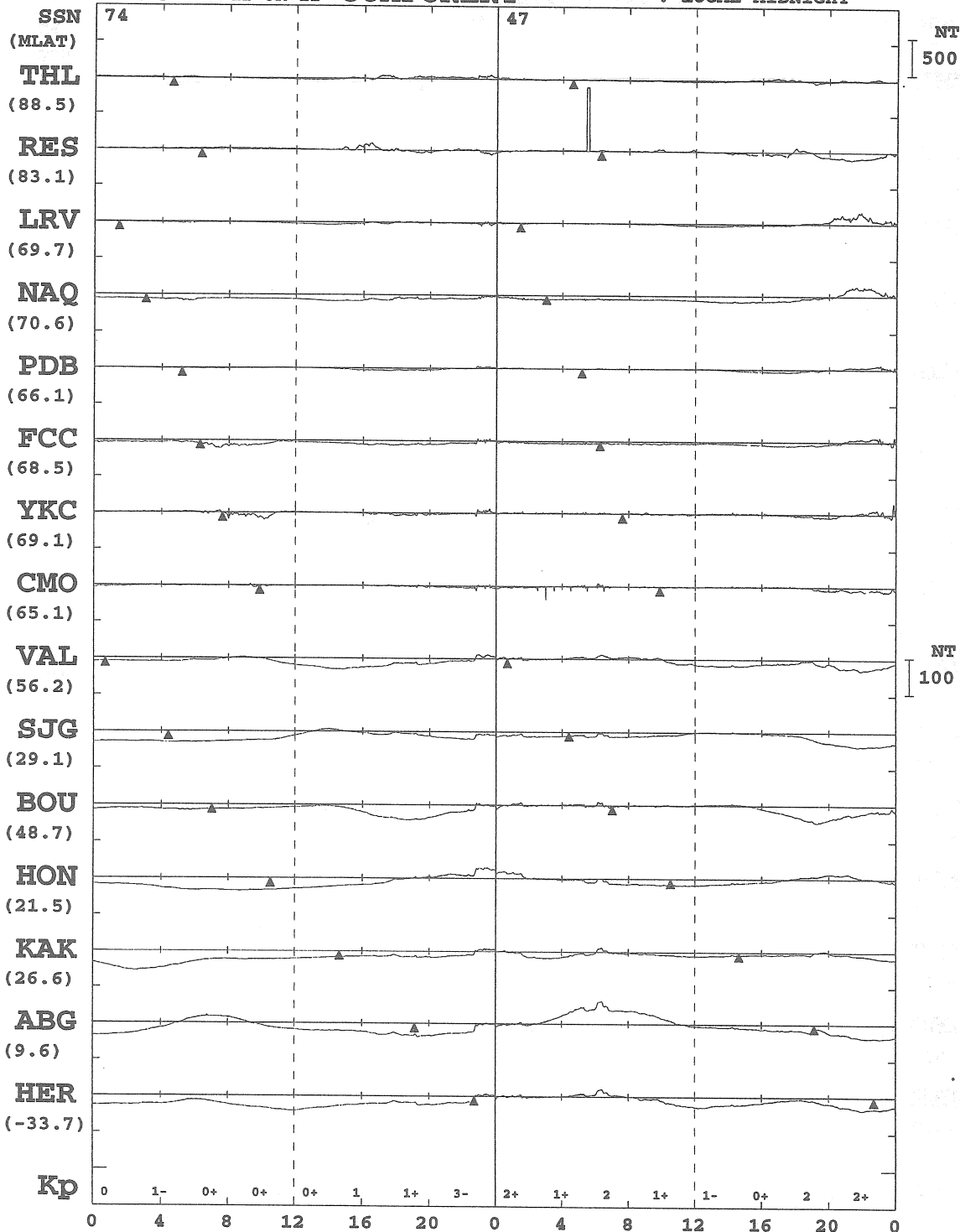
**FEB 20**  
(DAY 51)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

1999

H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



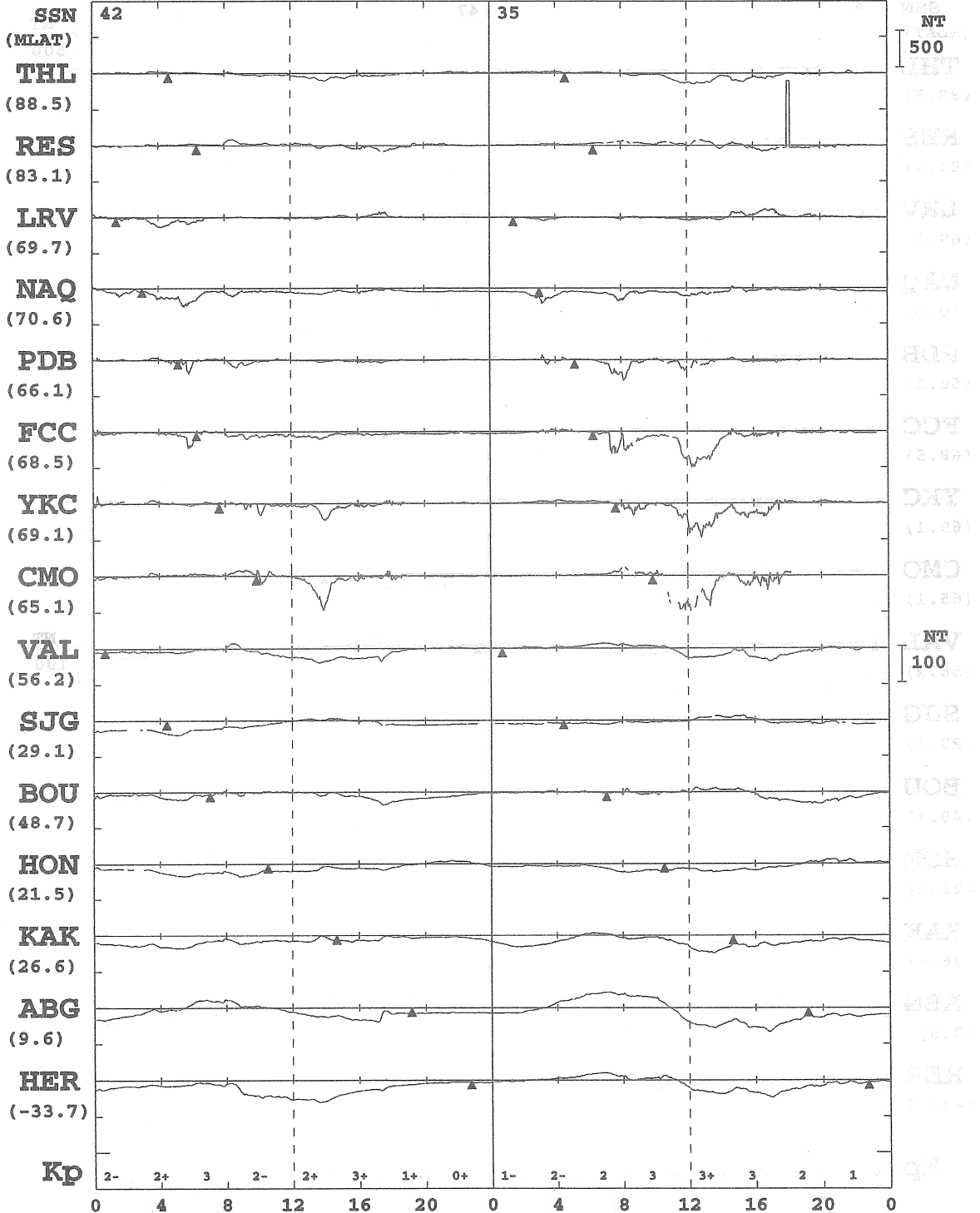
FEB 21  
(DAY 52)

FEB 22  
(DAY 53)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



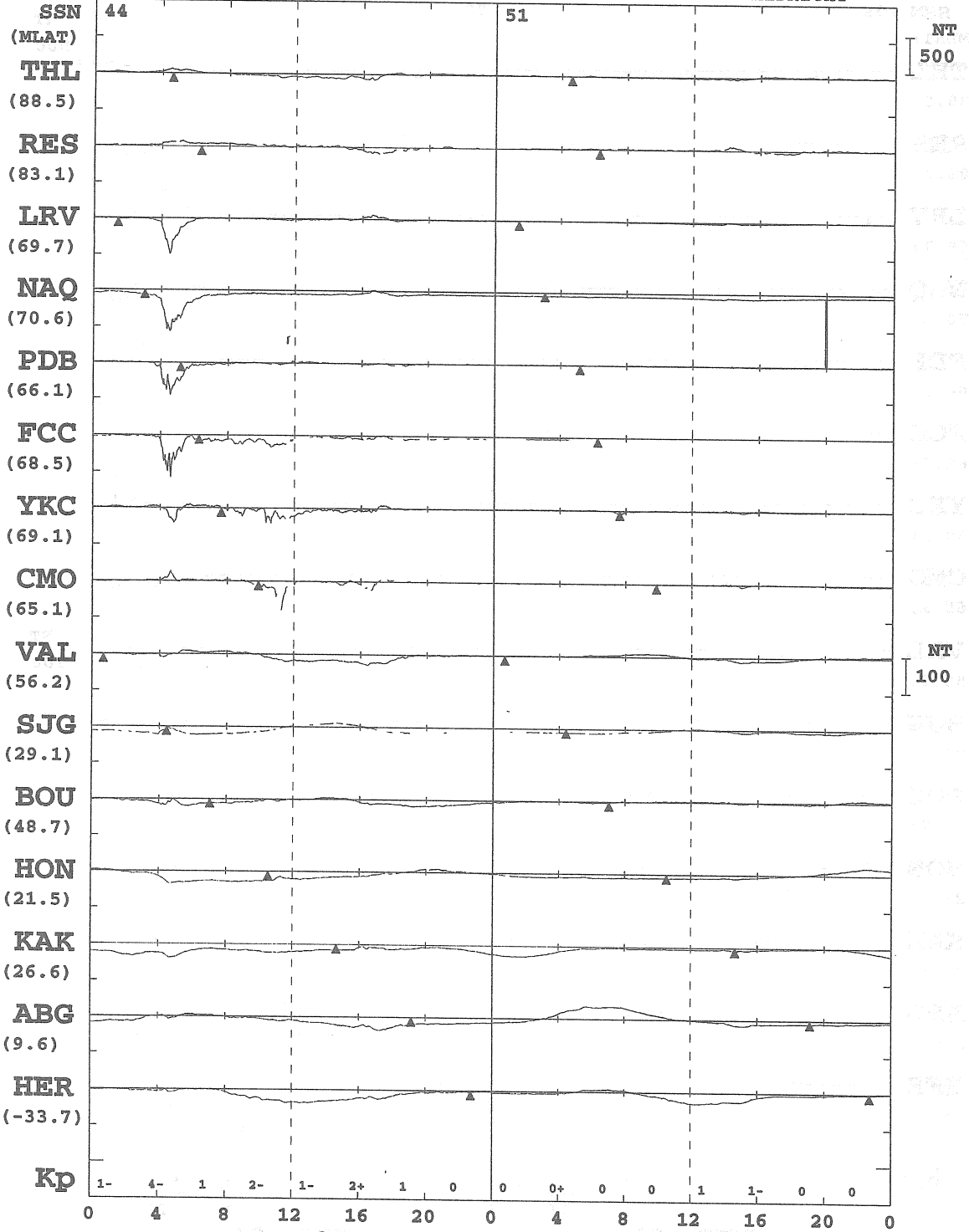
FEB 23  
(DAY 54)

FEB 24  
(DAY 55)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH KYOTO UNIV.

# 1999 H OR X-COMPONENT

△ : LOCAL MIDNIGHT



FEB 25  
(DAY 56)

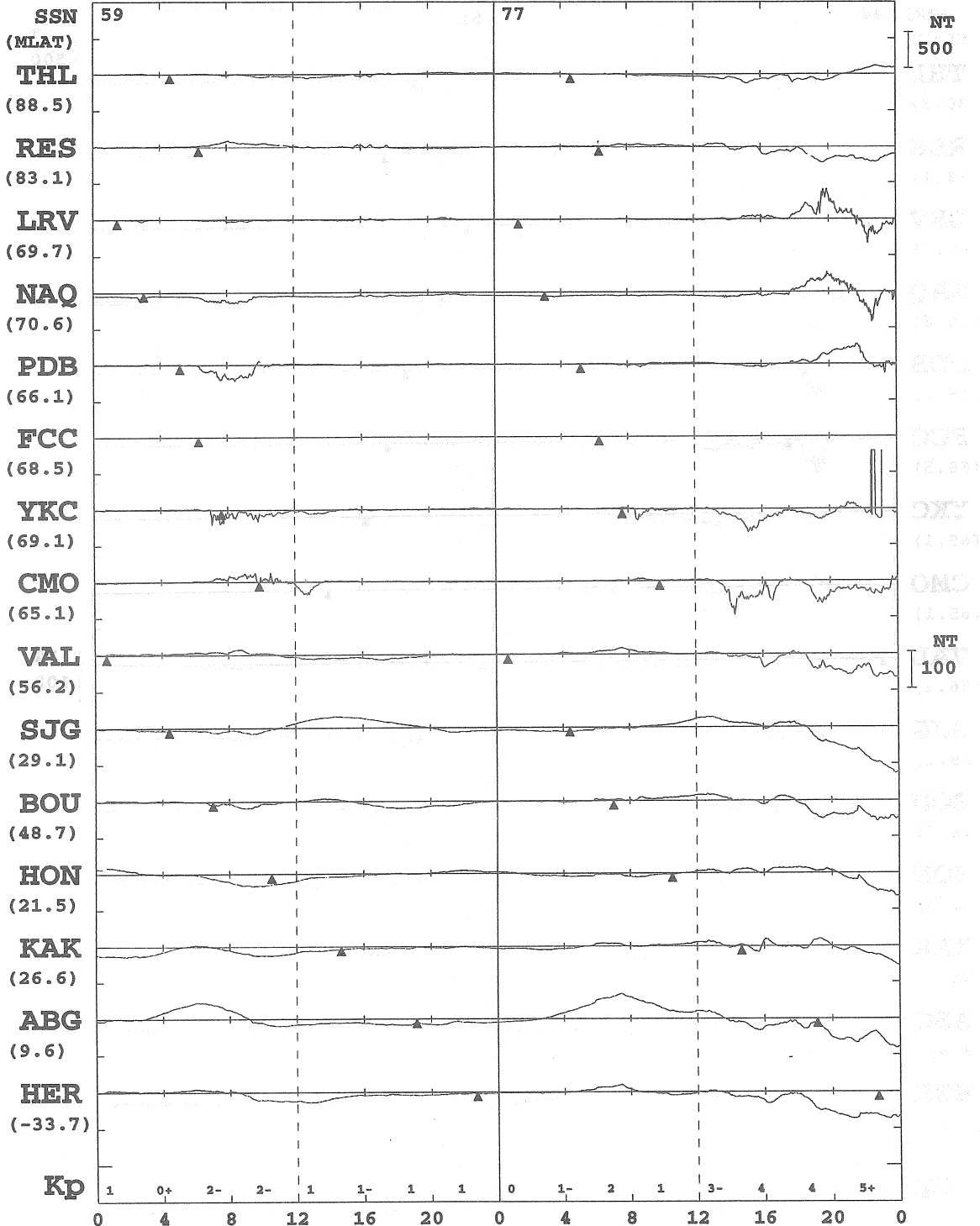
FEB 26  
(DAY 57)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



FEB 27  
(DAY 58)

FEB 28  
(DAY 59)

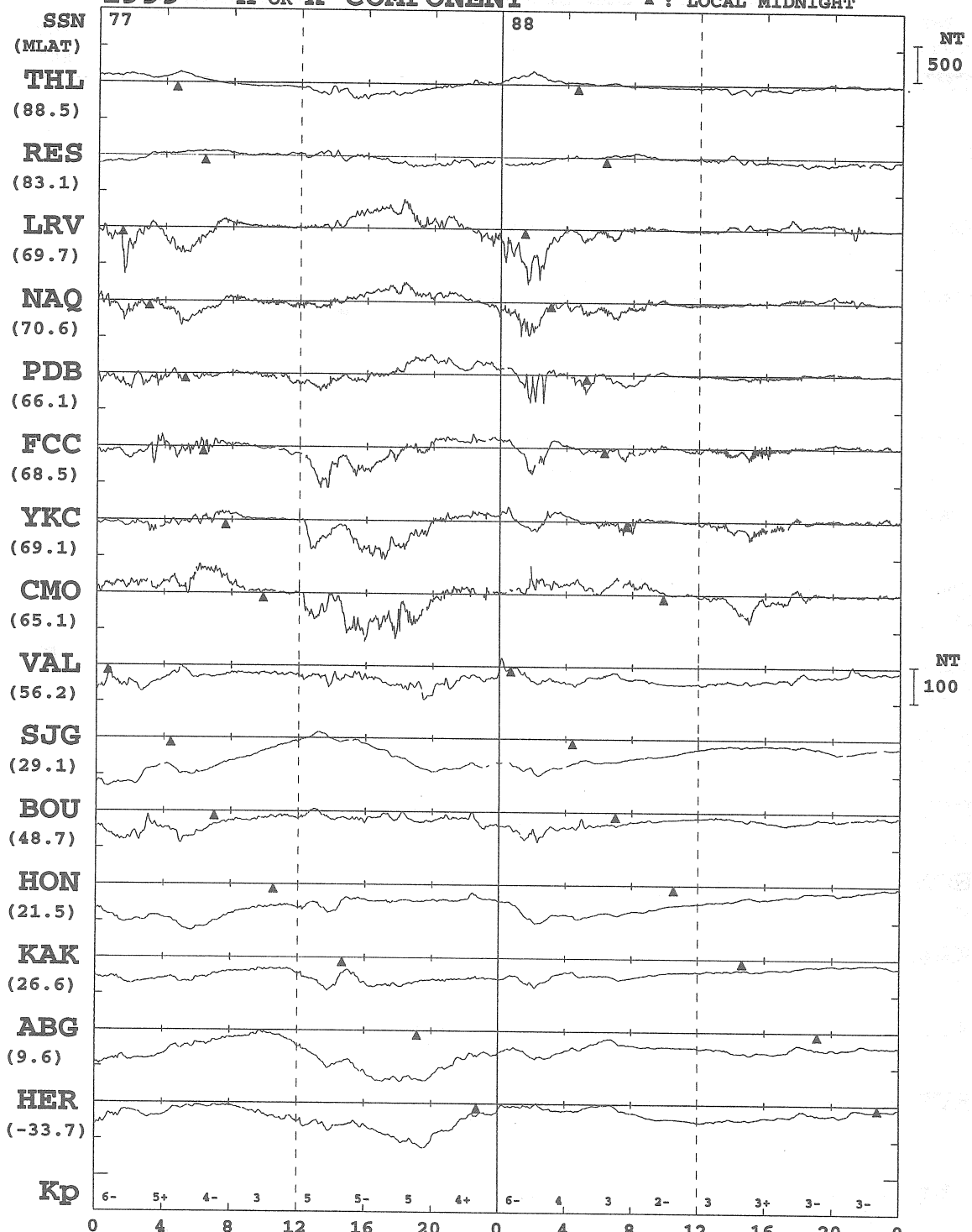
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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# 1999 H OR X-COMPONENT

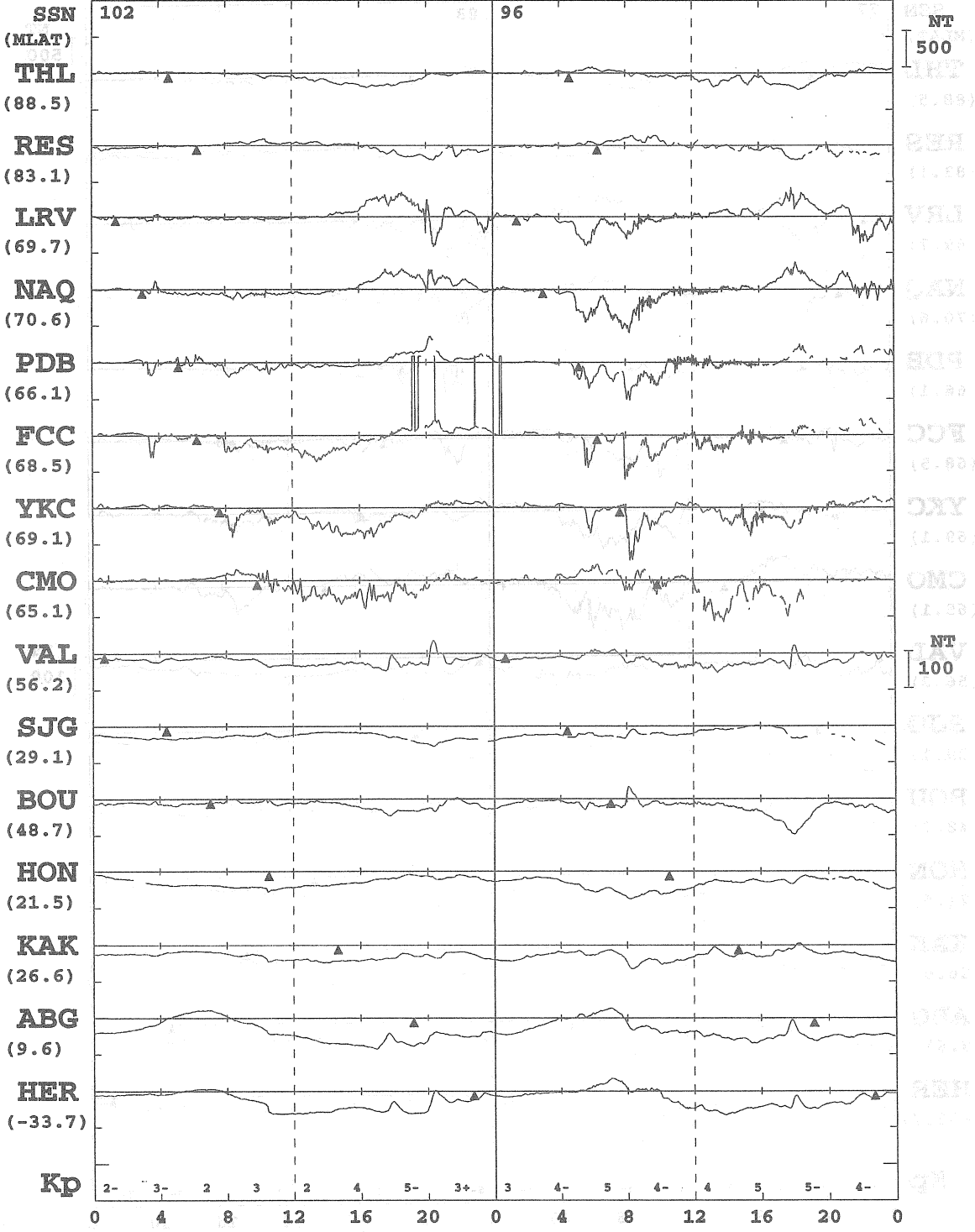
▲ : LOCAL MIDNIGHT



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1999 H OR X-COMPONENT Δ : LOCAL MIDNIGHT



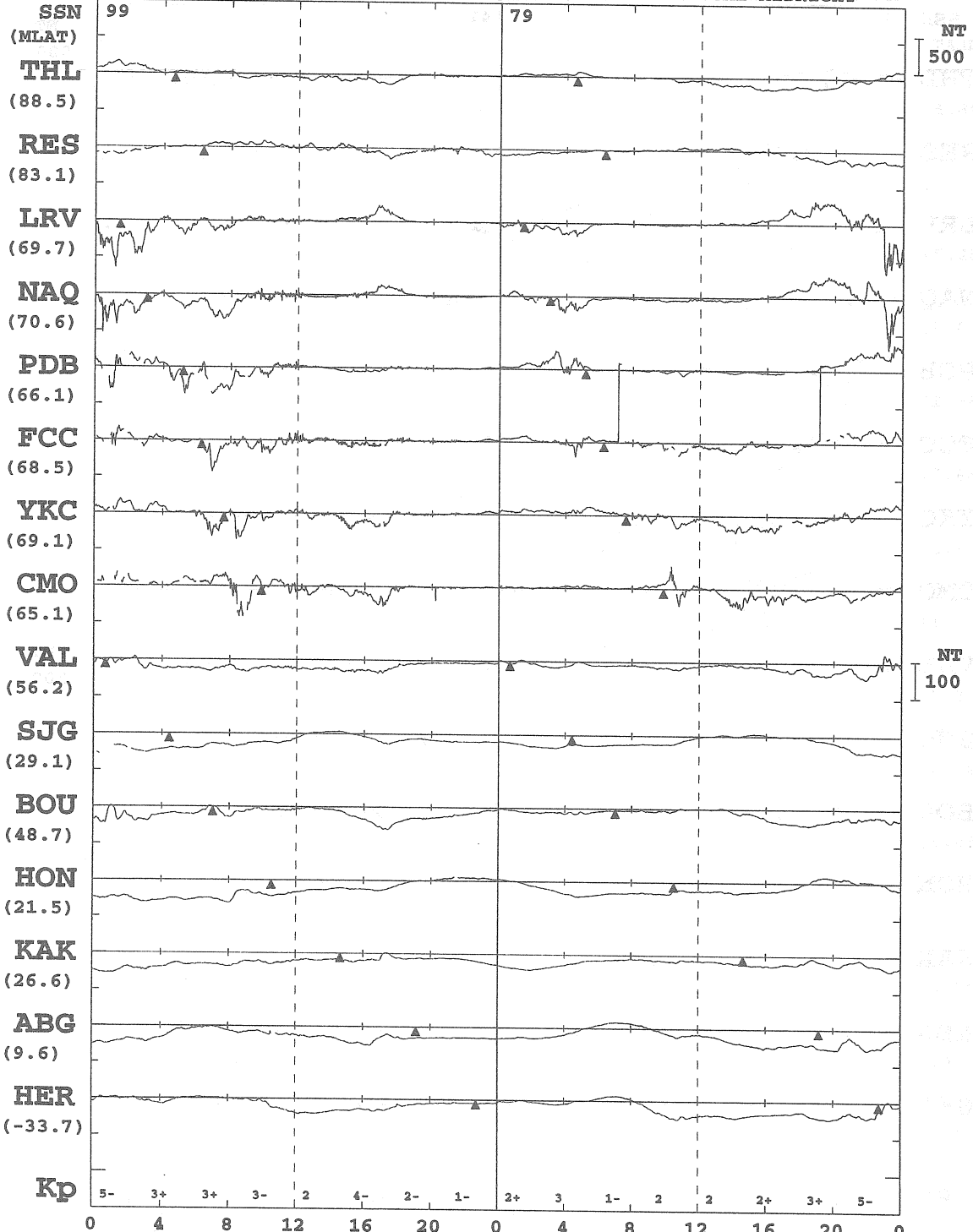
MAR 3 (DAY 62)

MAR 4 (DAY 63)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



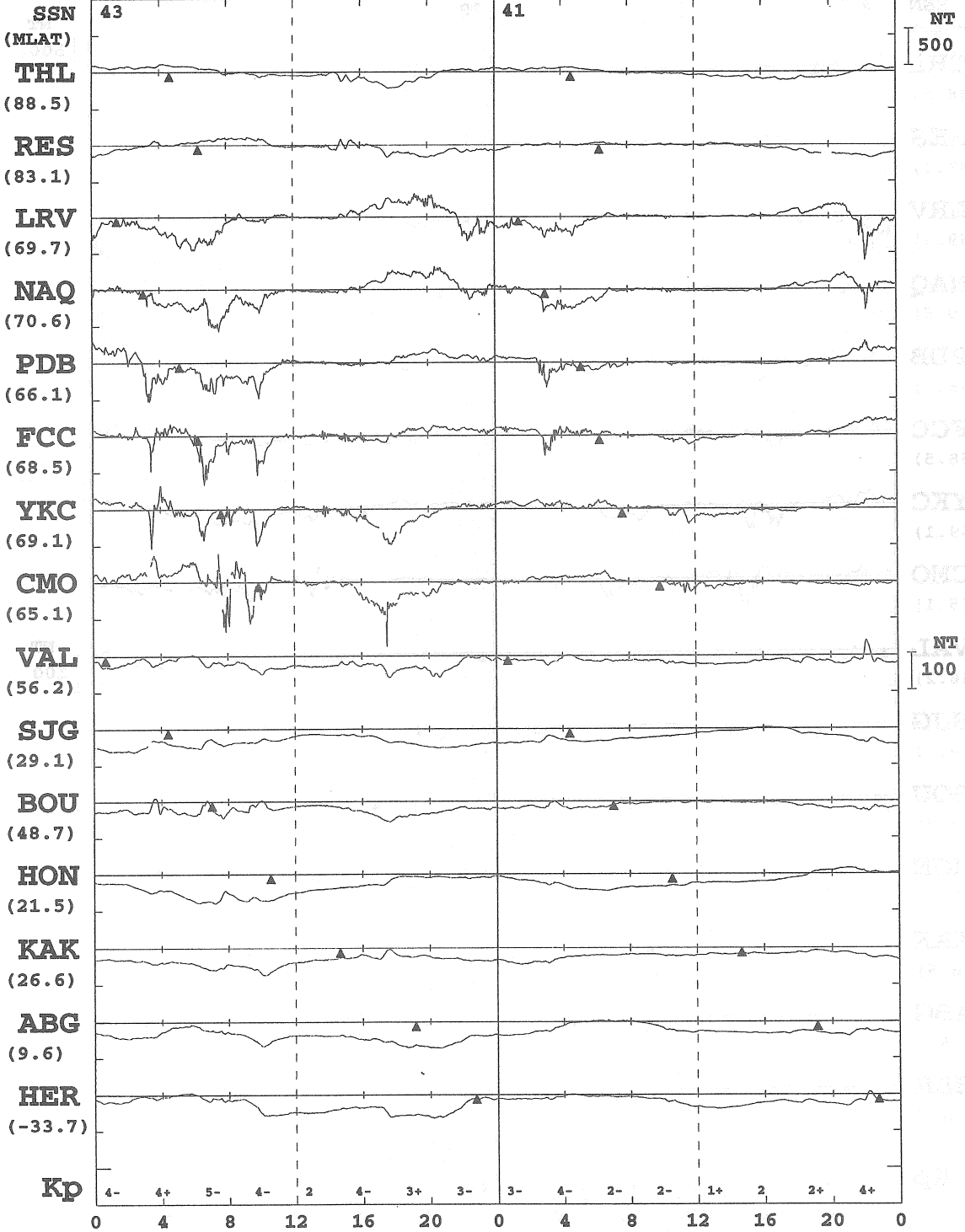
MAR 5  
(DAY 64)

MAR 6  
(DAY 65)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



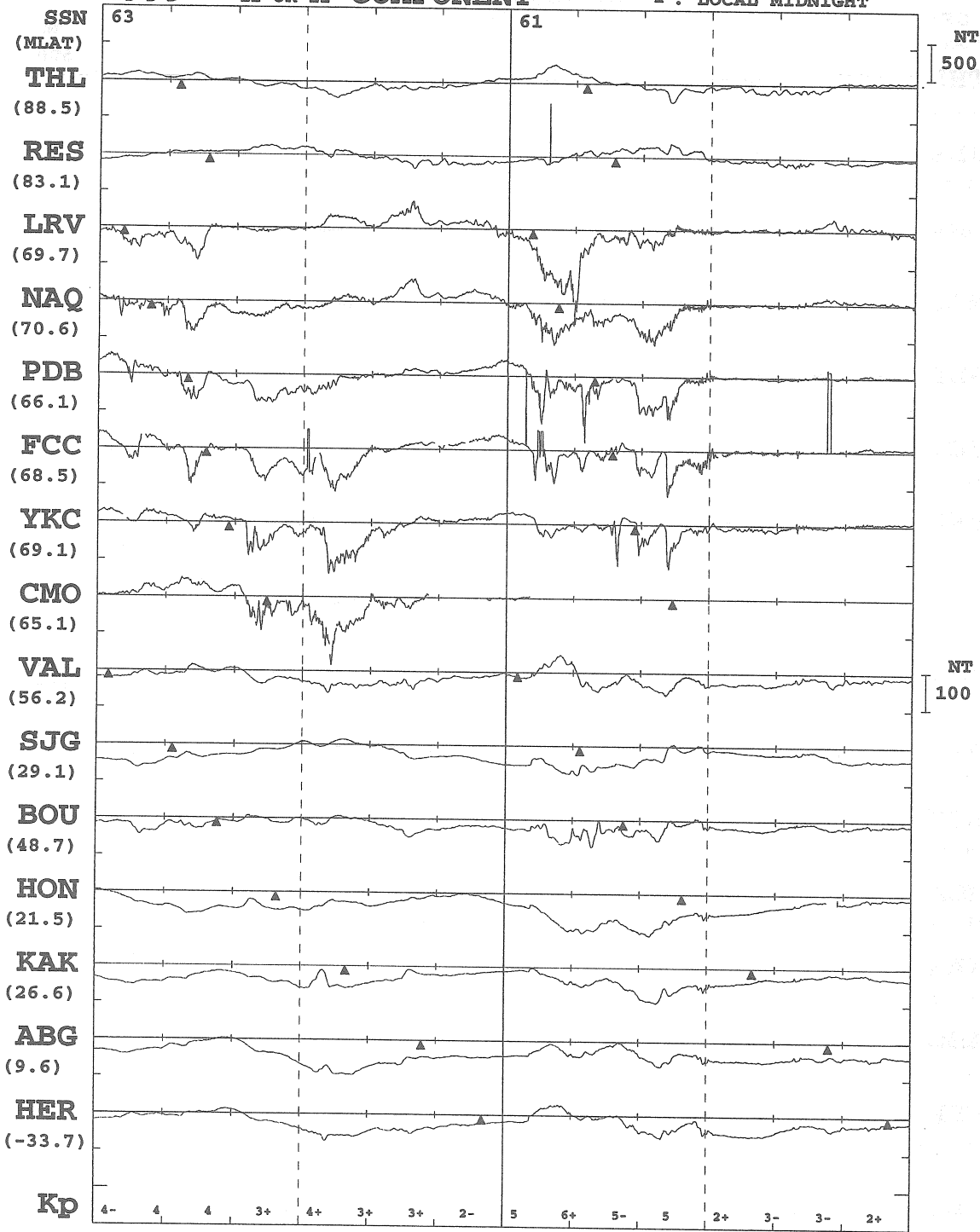
MAR 7  
(DAY 66)

MAR 8  
(DAY 67)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



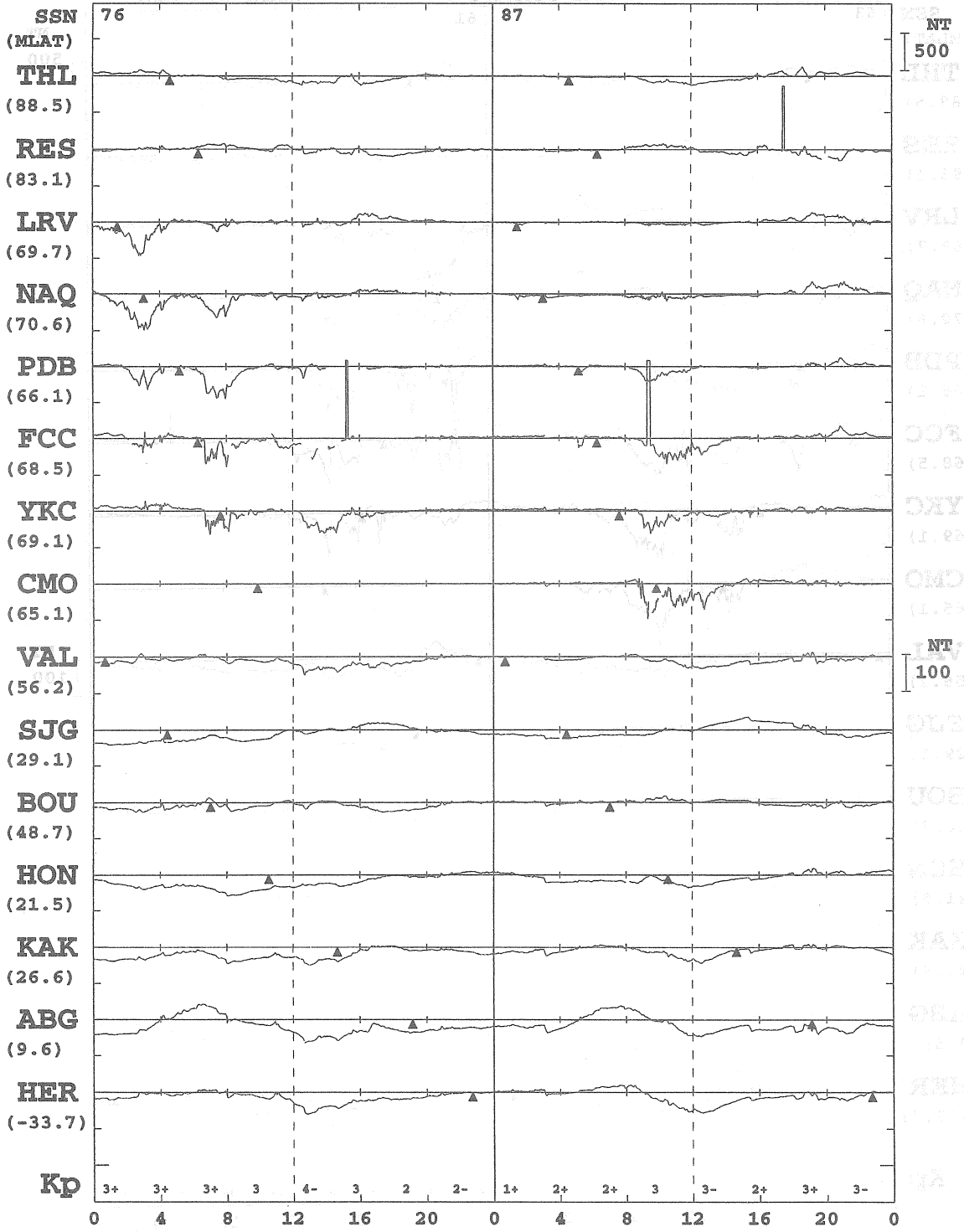
MAR 9  
(DAY 68)

MAR 10  
(DAY 69)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

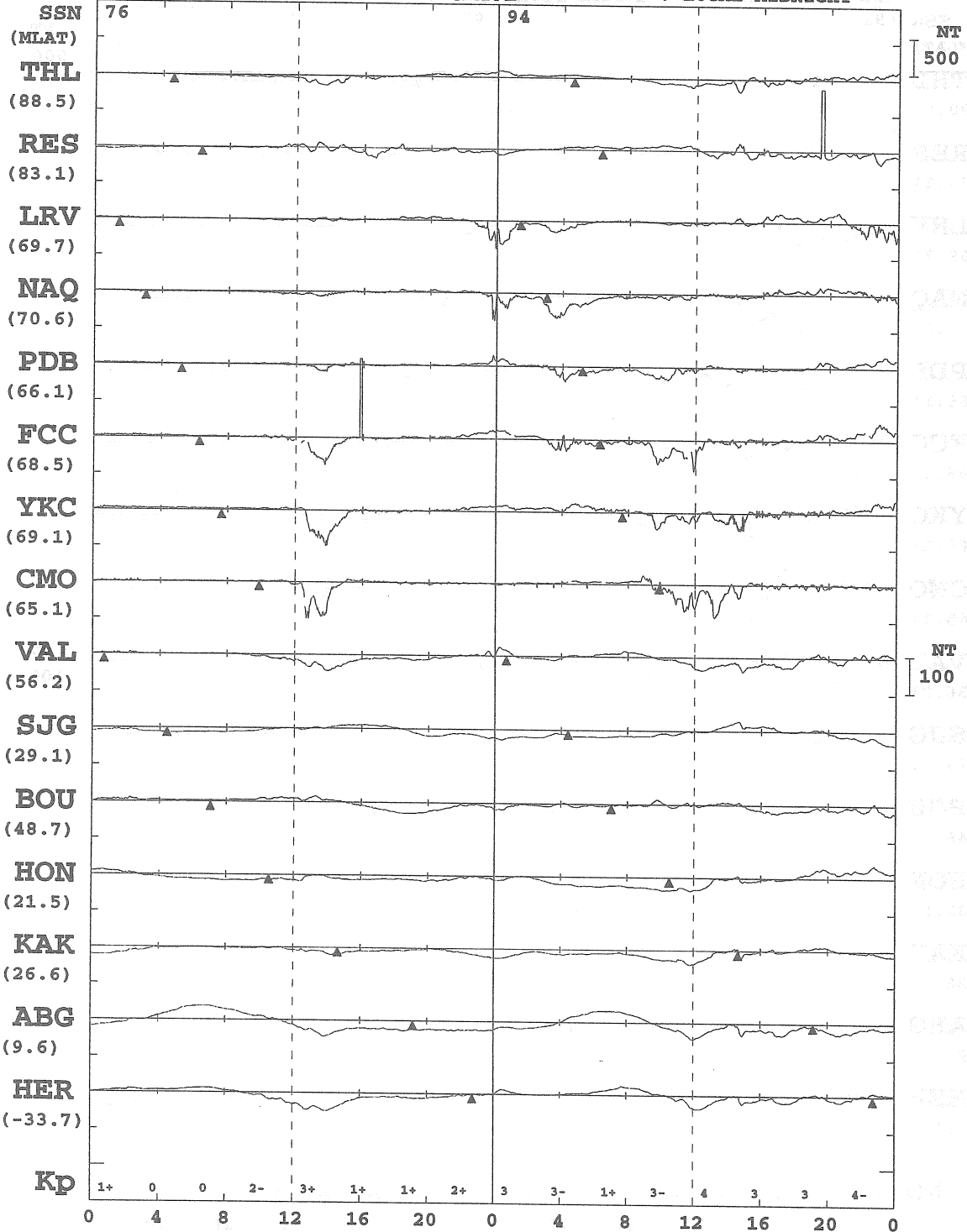
1999 H OR X-COMPONENT LOCAL MIDNIGHT



MAR 11 (DAY 70) MAR 12 (DAY 71)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH  
 KYOTO UNIV.

1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



MAR 13  
(DAY 72)

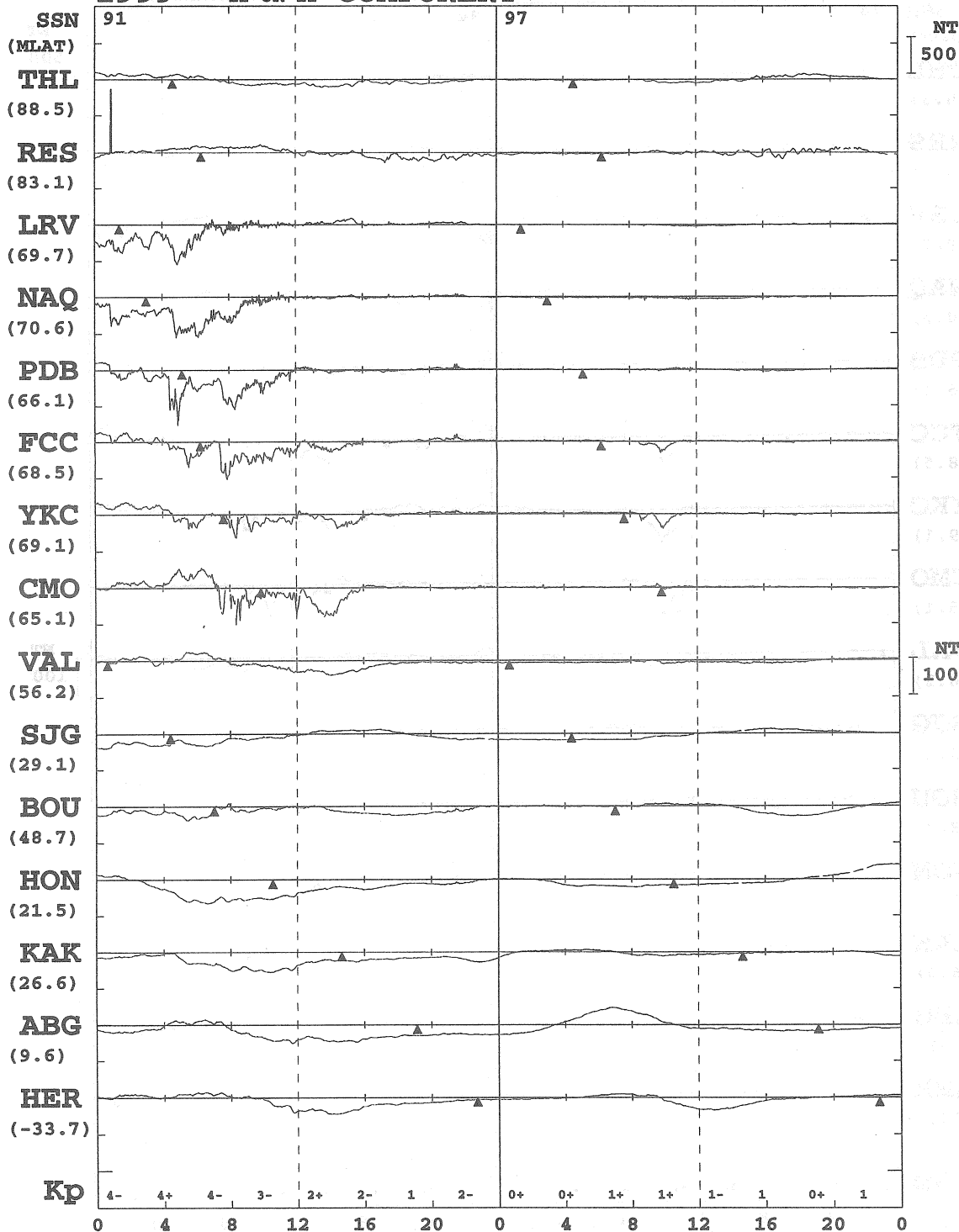
MAR 14  
(DAY 73)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAR 15  
(DAY 74)

MAR 16  
(DAY 75)

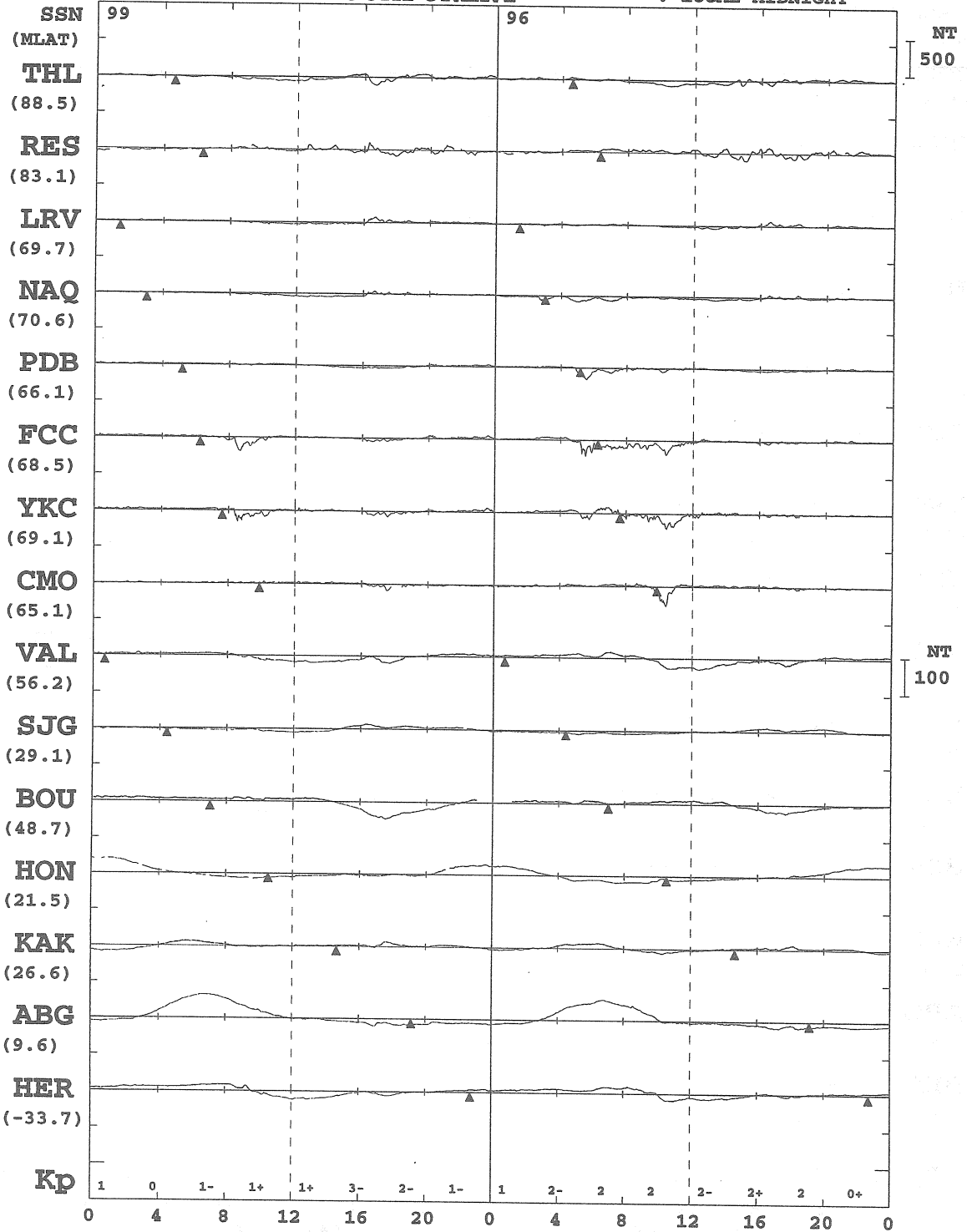
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



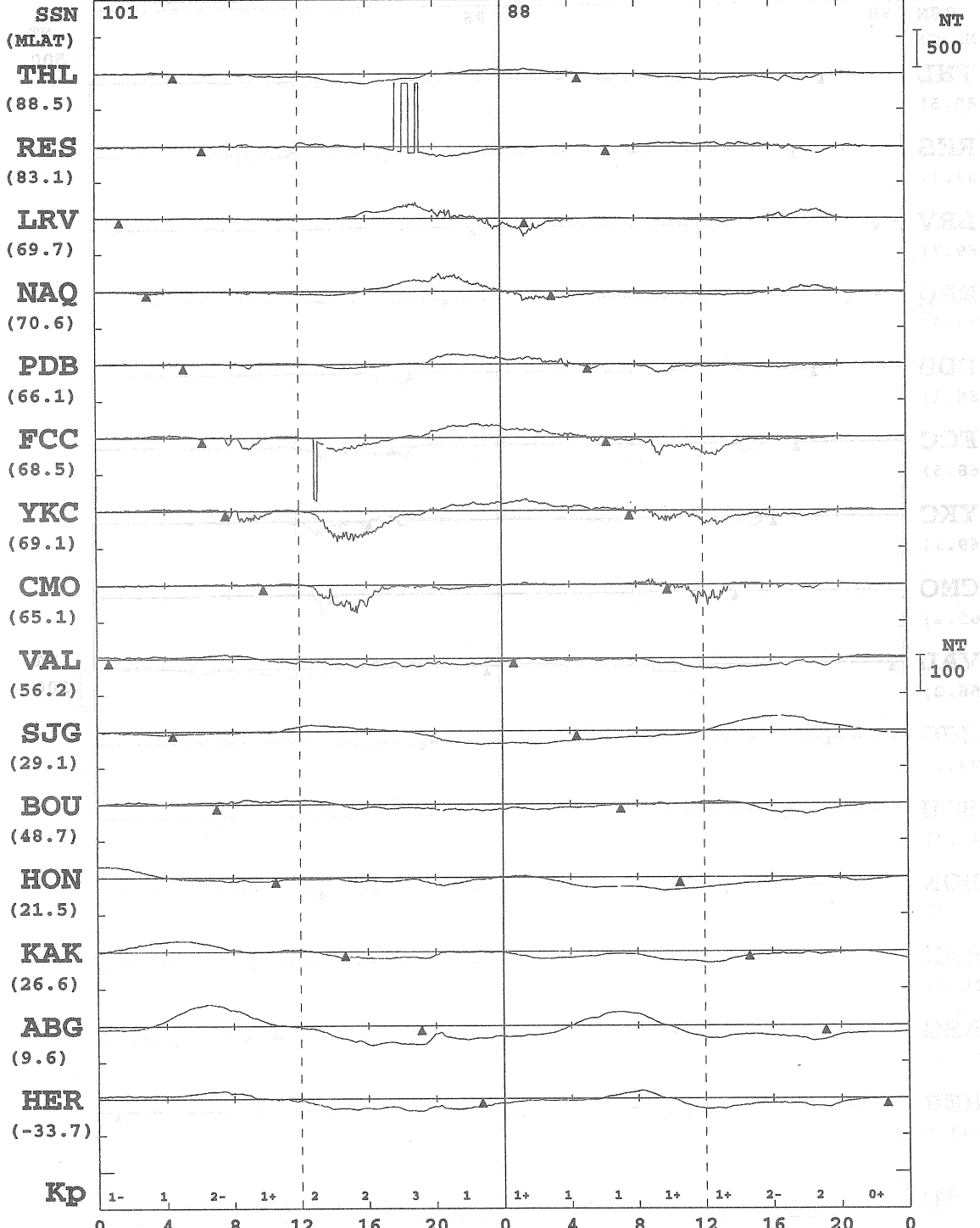
MAR 17  
(DAY 76)

MAR 18  
(DAY 77)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT LOCAL MIDNIGHT



MAR 19  
(DAY 78)

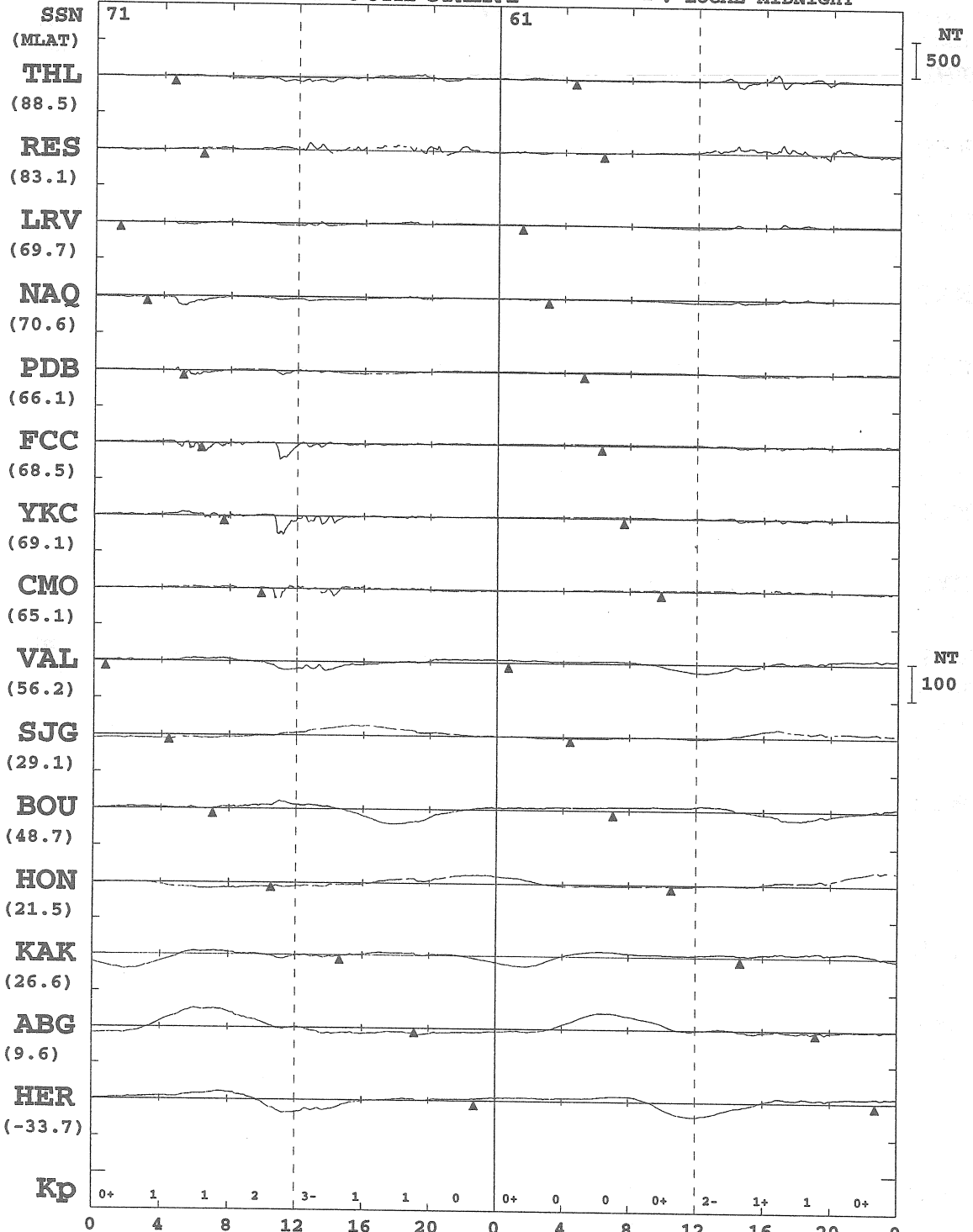
MAR 20  
(DAY 79)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



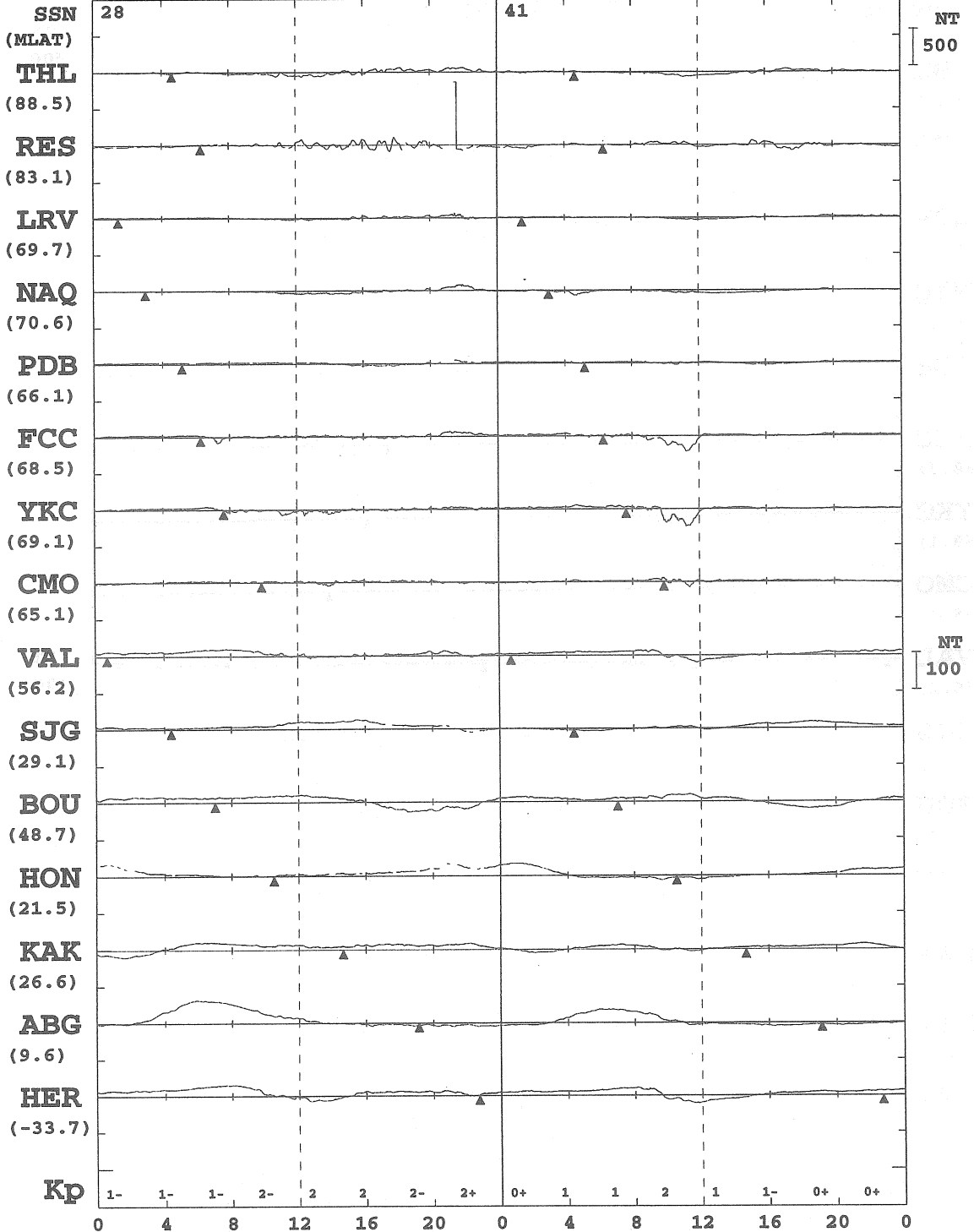
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999

H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

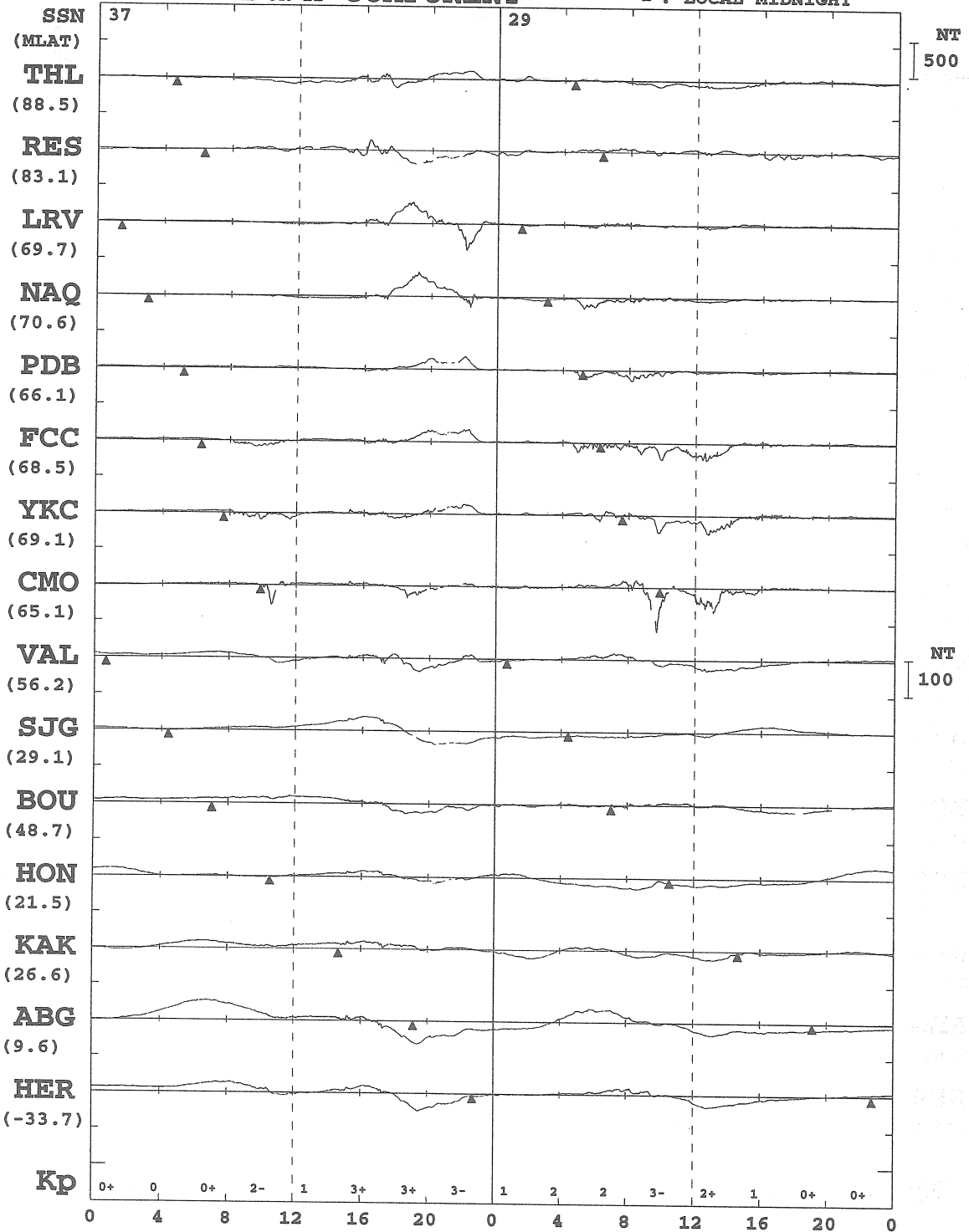


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

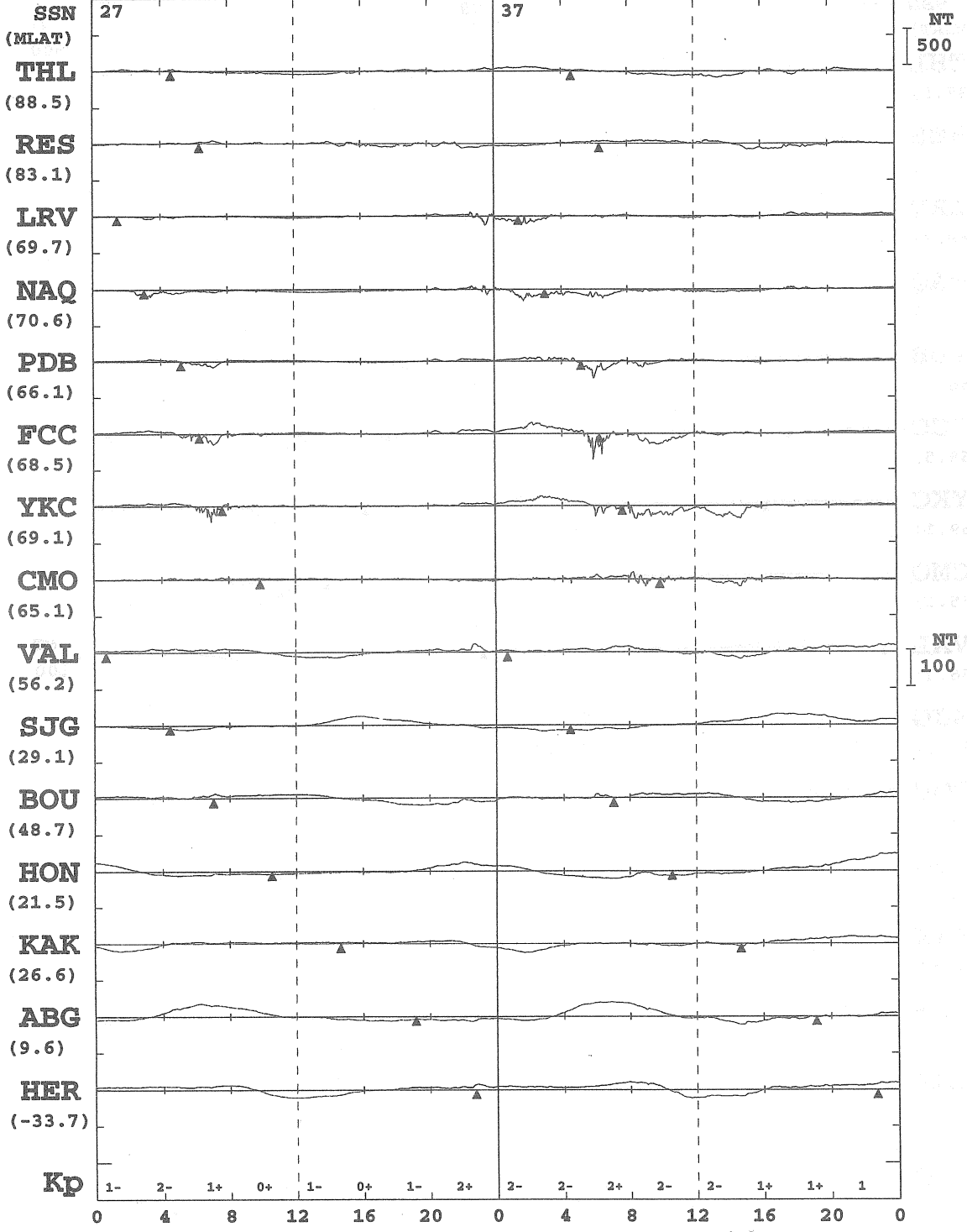
▲ : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

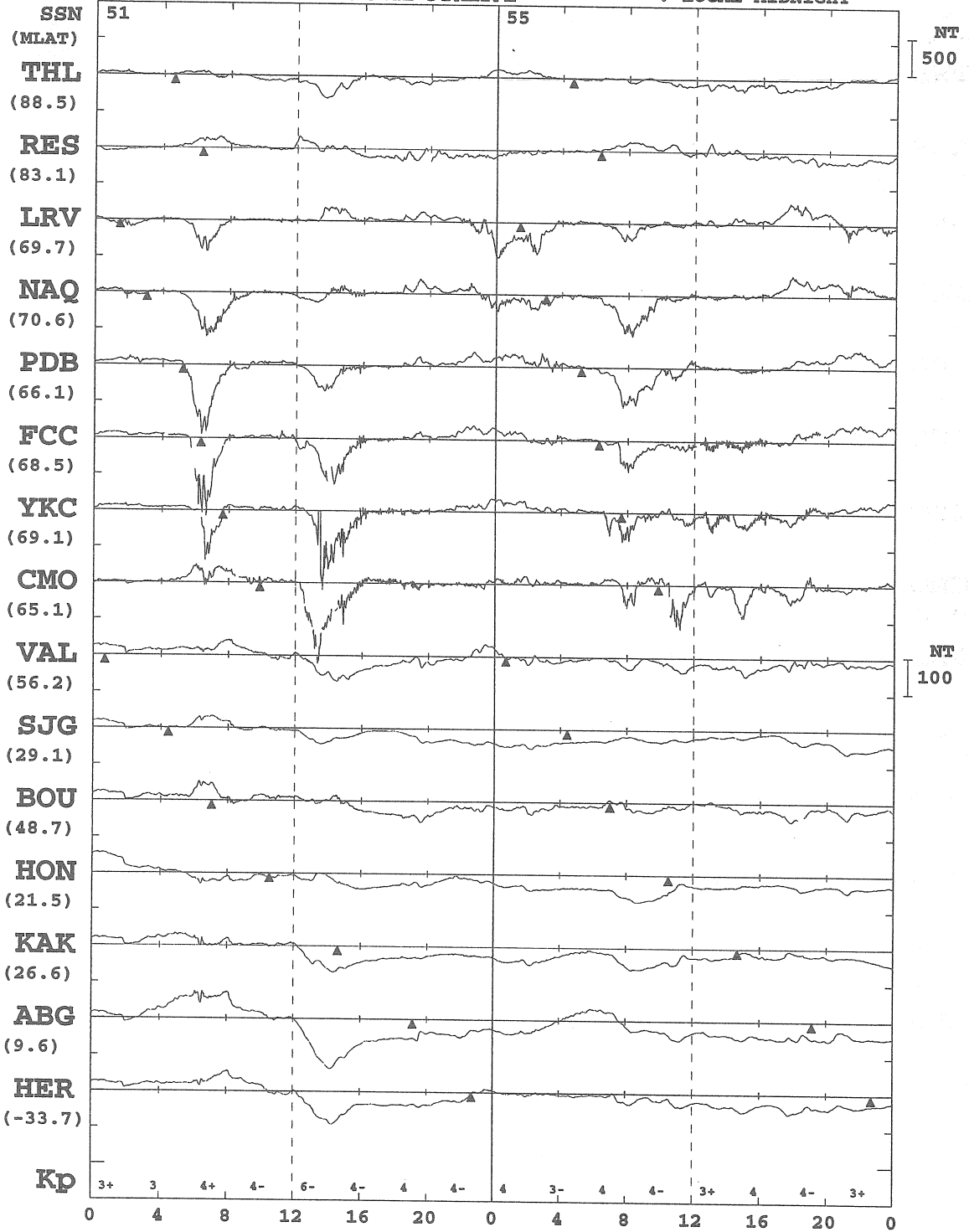
1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH  
 KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAR 29  
(DAY 88)

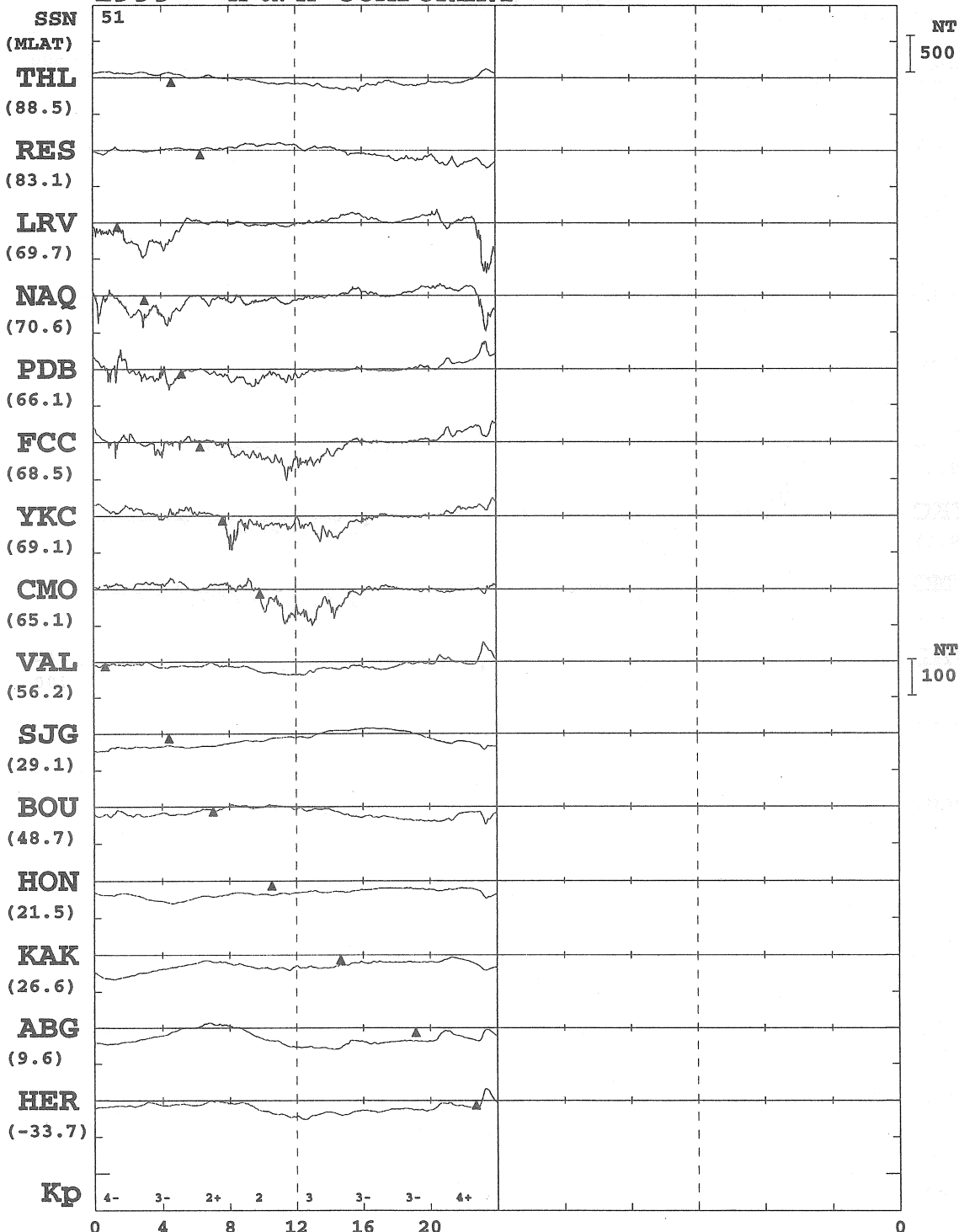
MAR 30  
(DAY 89)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



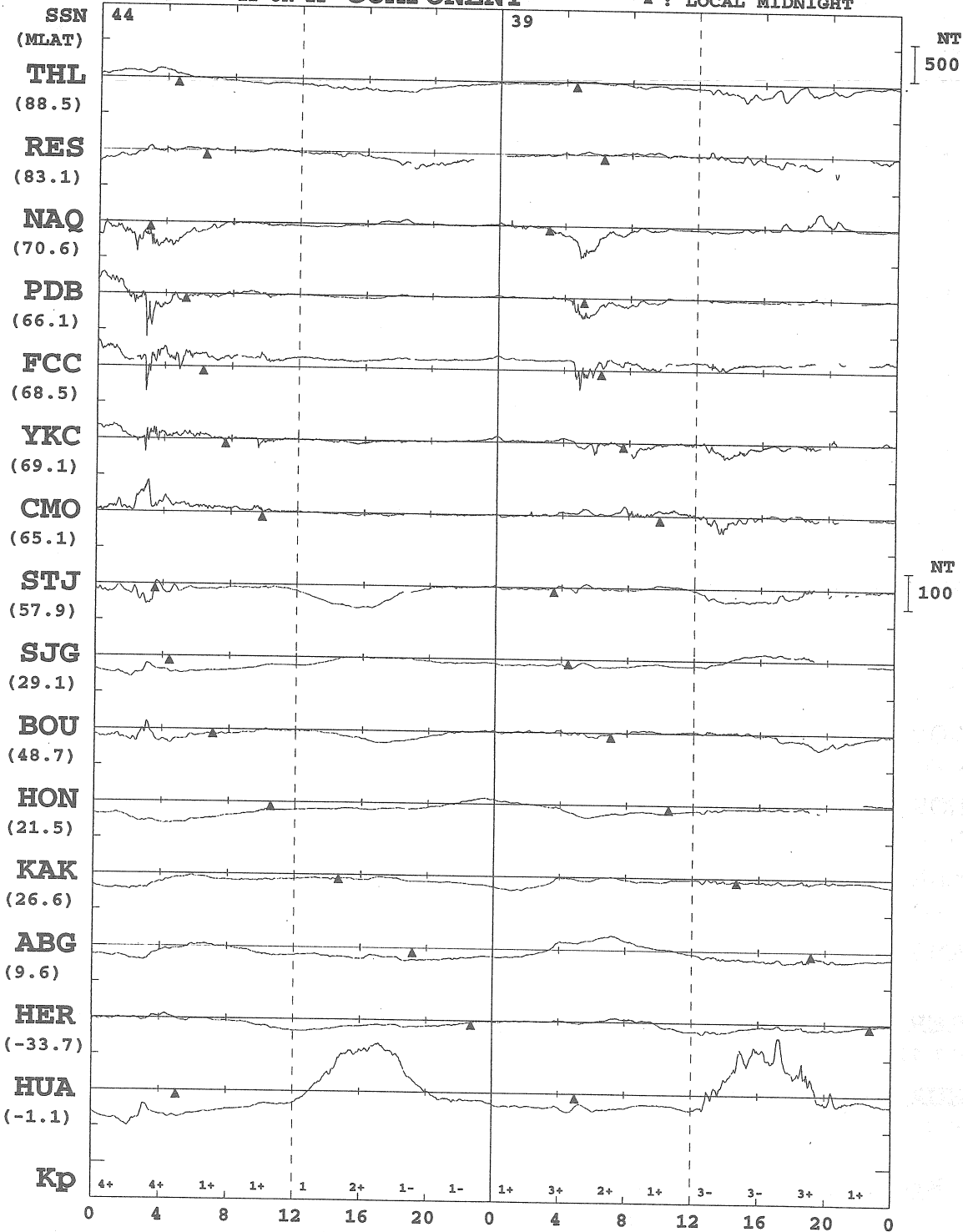
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

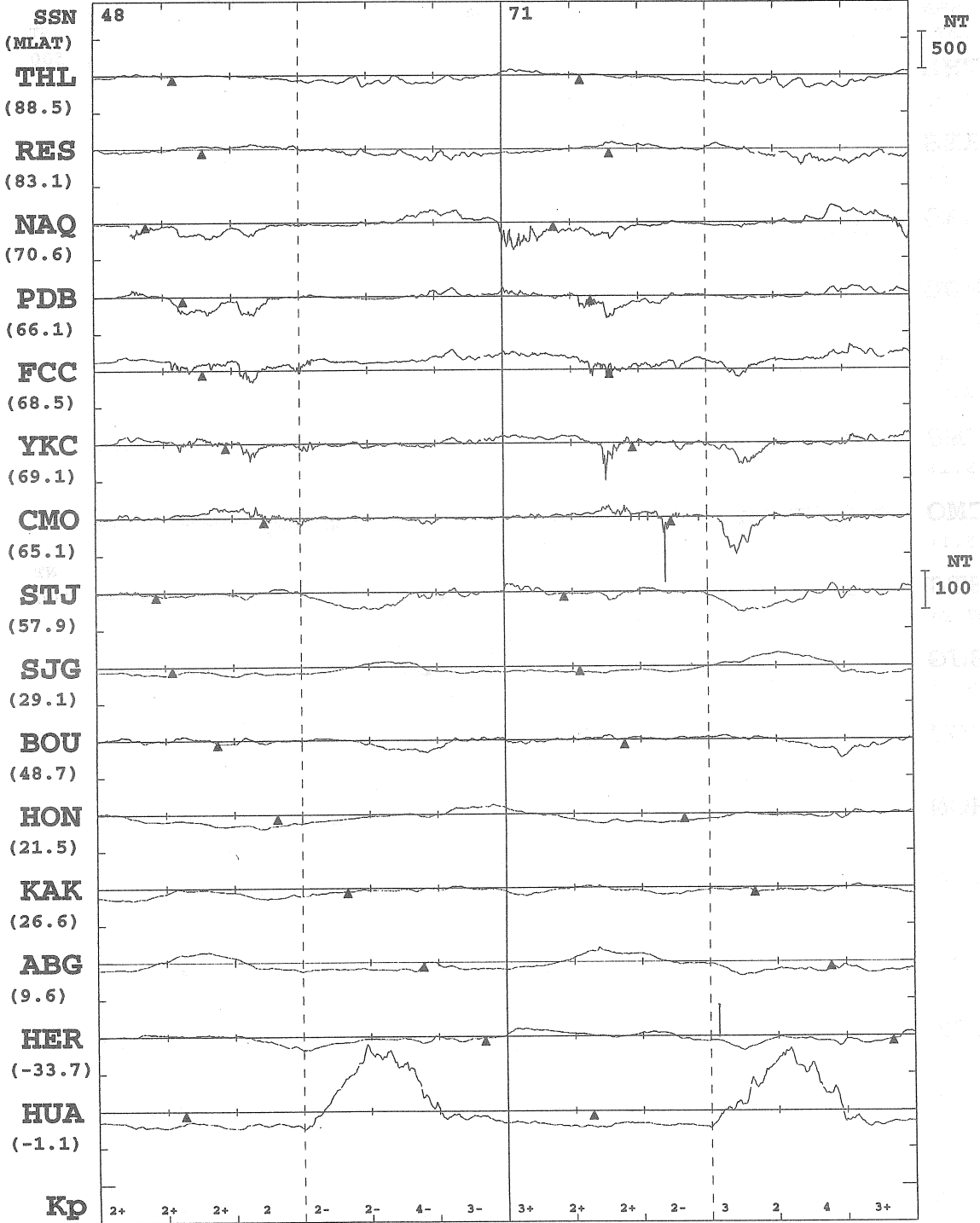


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



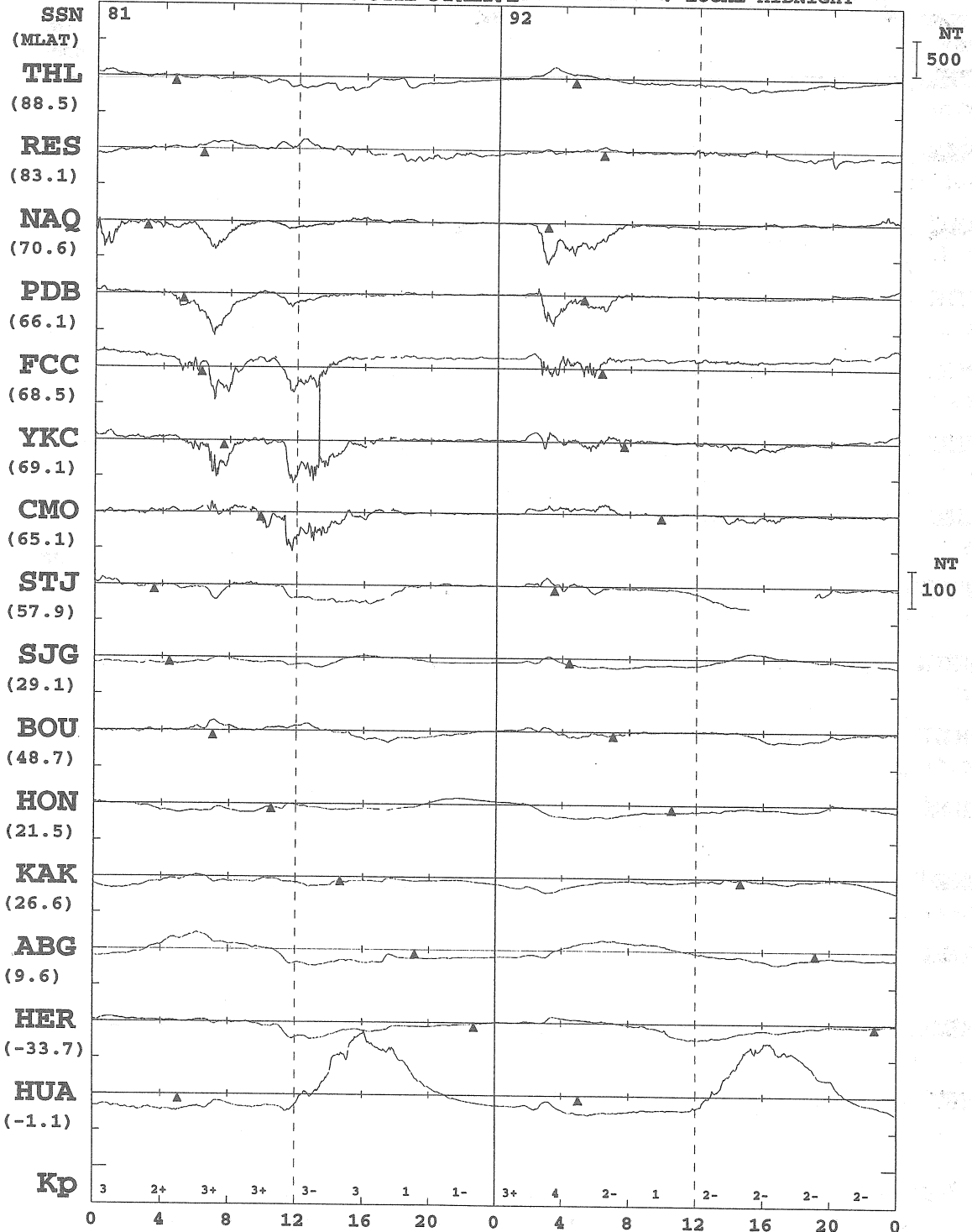
APR 3  
(DAY 93)

APR 4  
(DAY 94)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



APR 5  
(DAY 95)

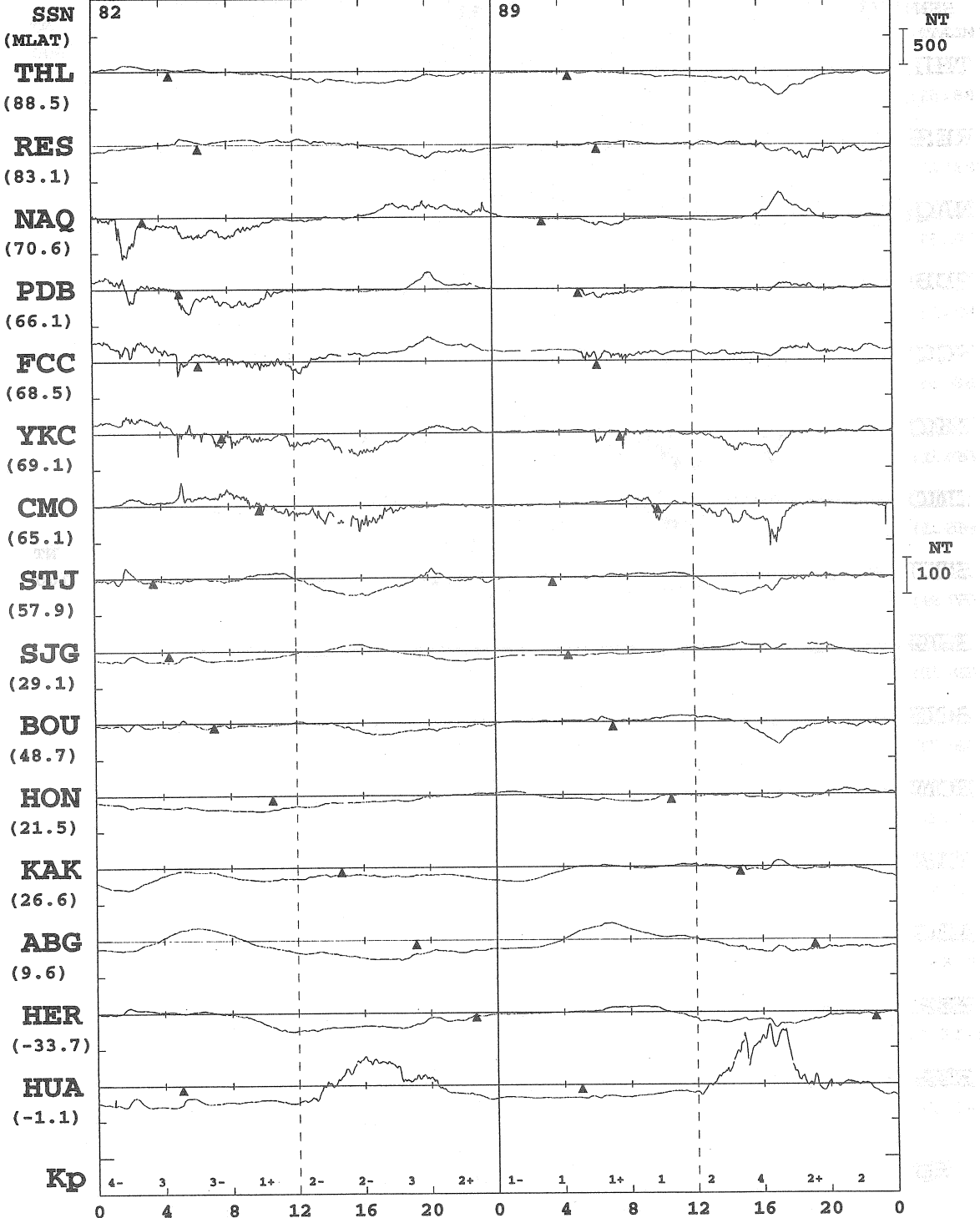
APR 6  
(DAY 96)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



APR 7  
(DAY 97)

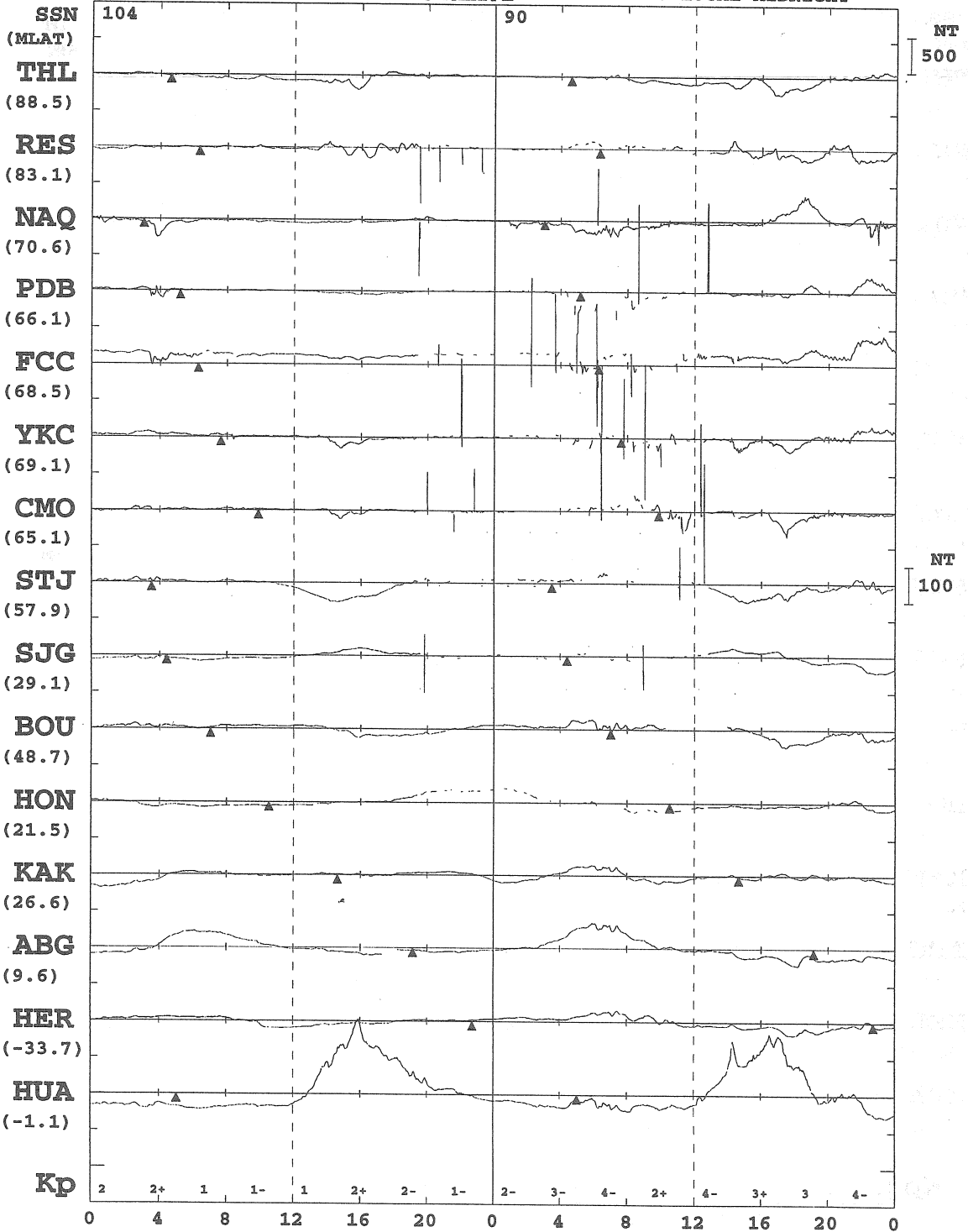
APR 8  
(DAY 98)

- \* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
- \* PROMPT DATA ARE INCLUDED
- \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



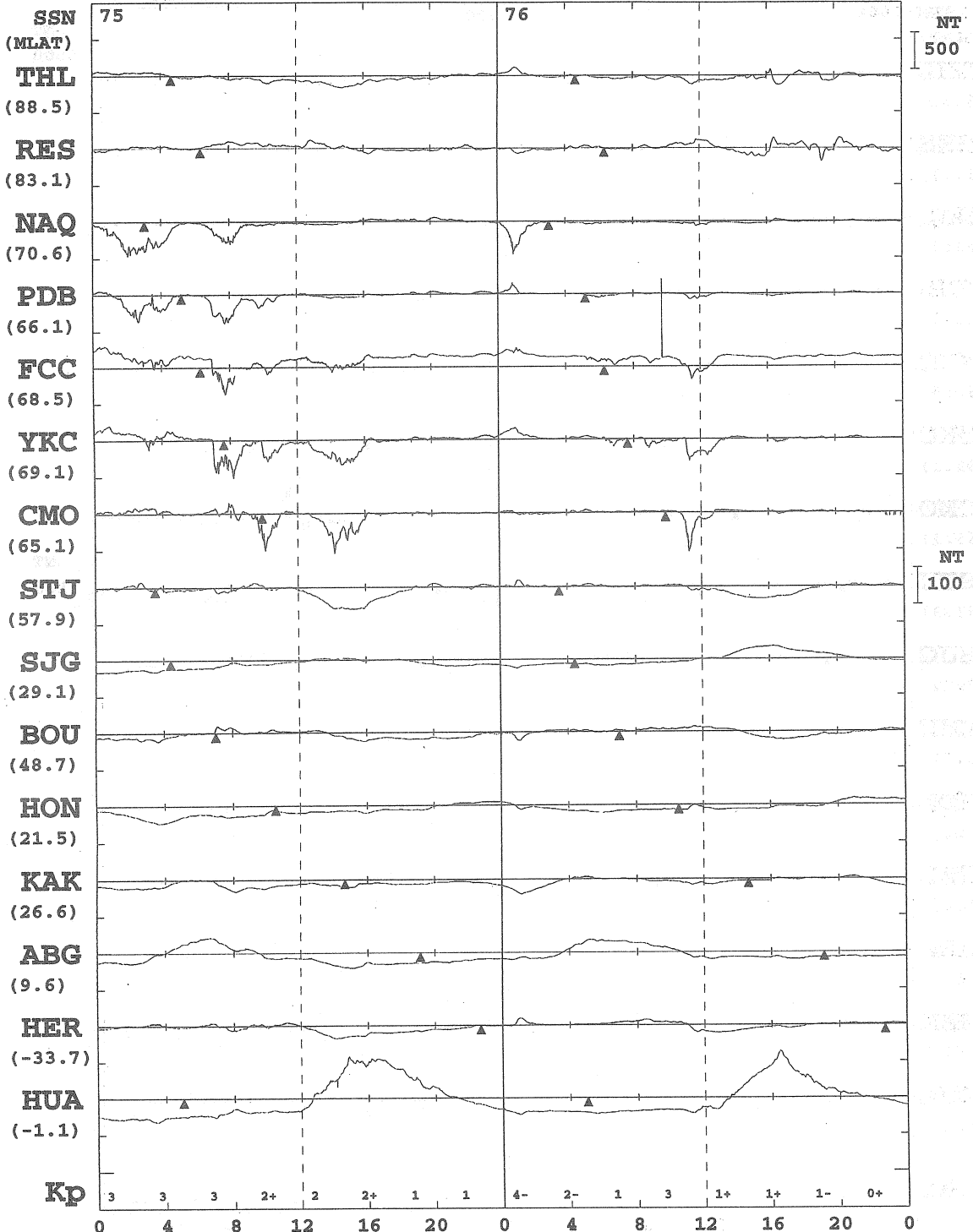
APR 9  
(DAY 99)

APR 10  
(DAY 100)

- \* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
- \* PROMPT DATA ARE INCLUDED
- \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

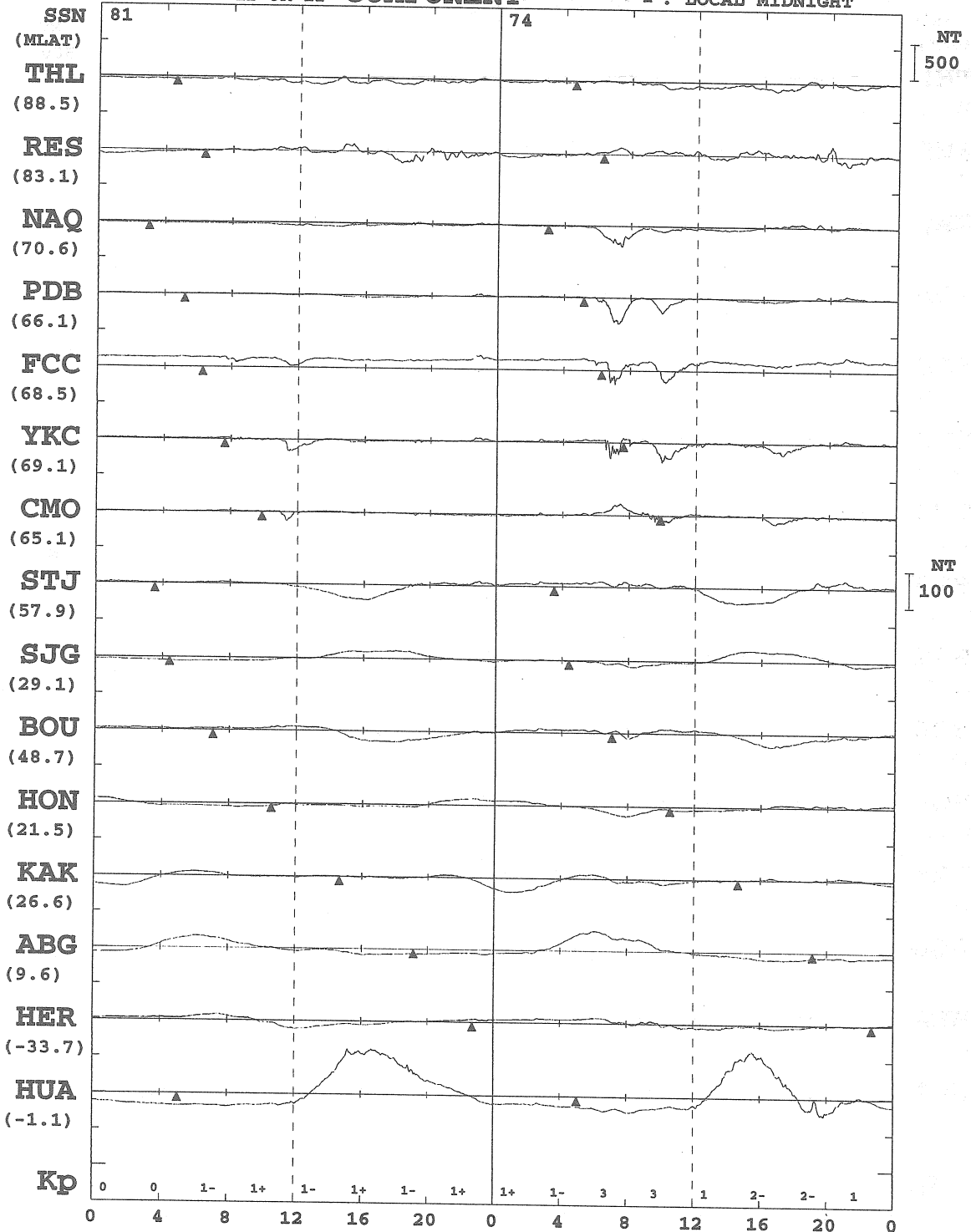
1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



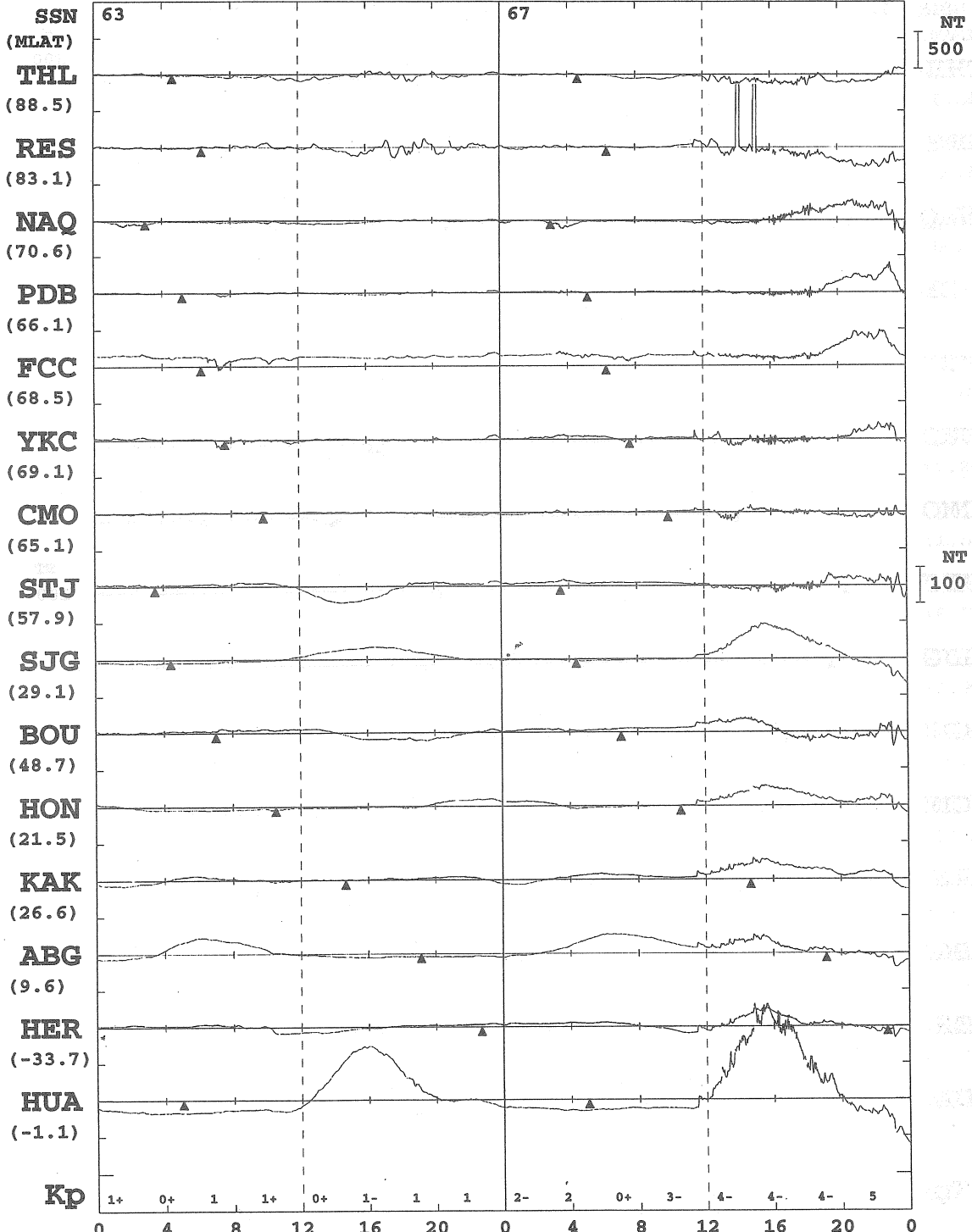
APR 13  
(DAY 103)

APR 14  
(DAY 104)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



APR 15  
(DAY 105)

APR 16  
(DAY 106)

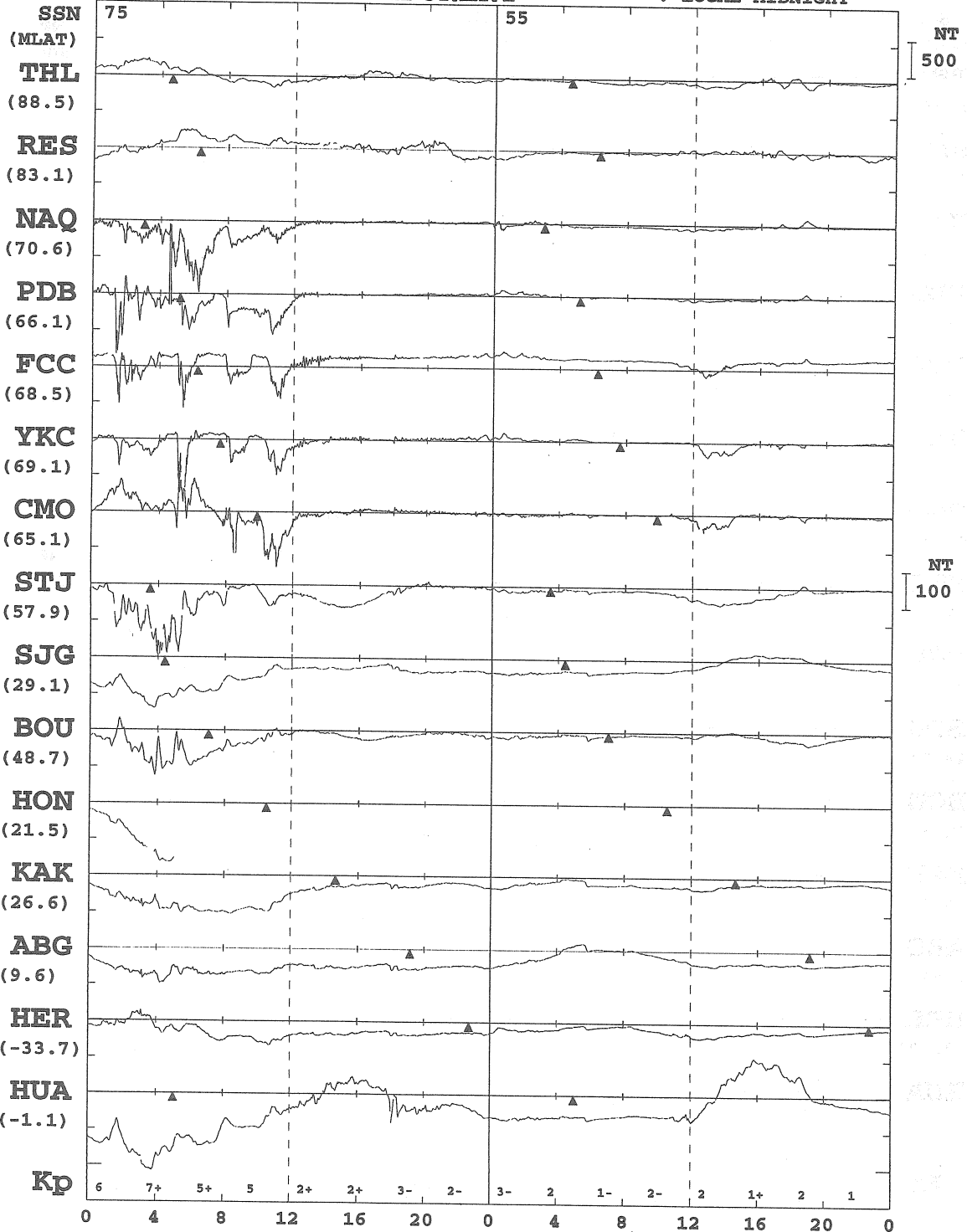
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 1999 H OR X-COMPONENT

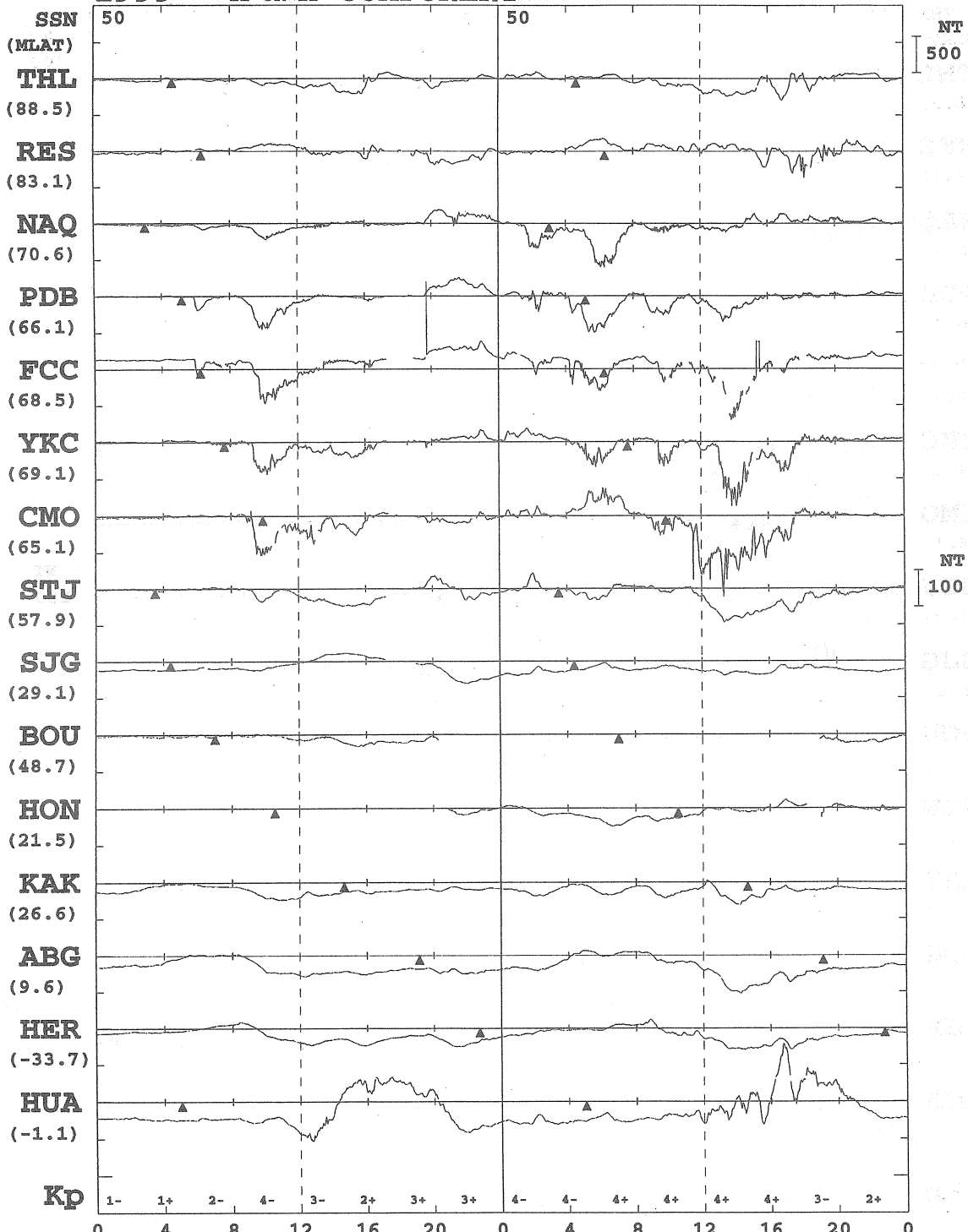
▲ : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

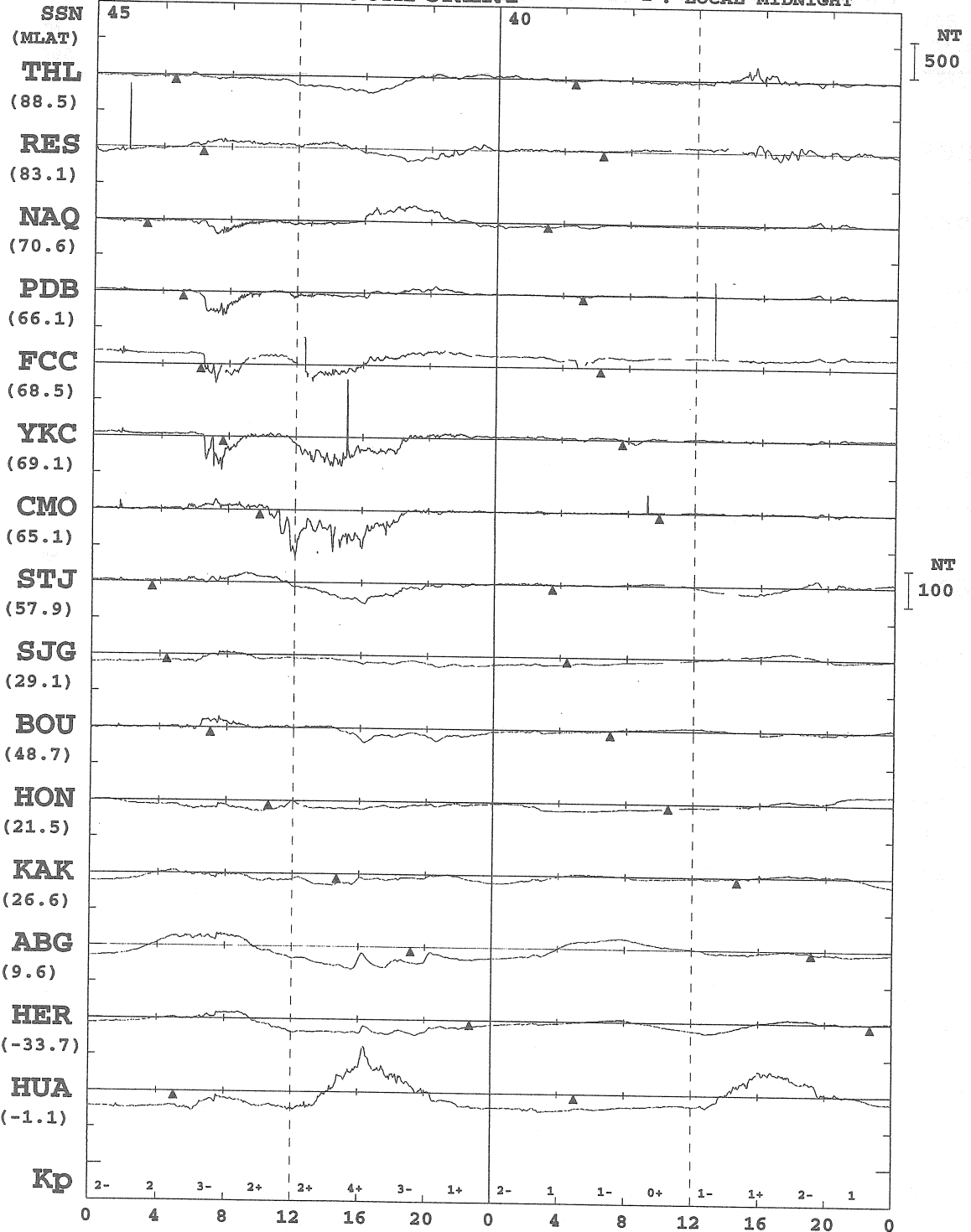


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



APR 21  
(DAY 111)

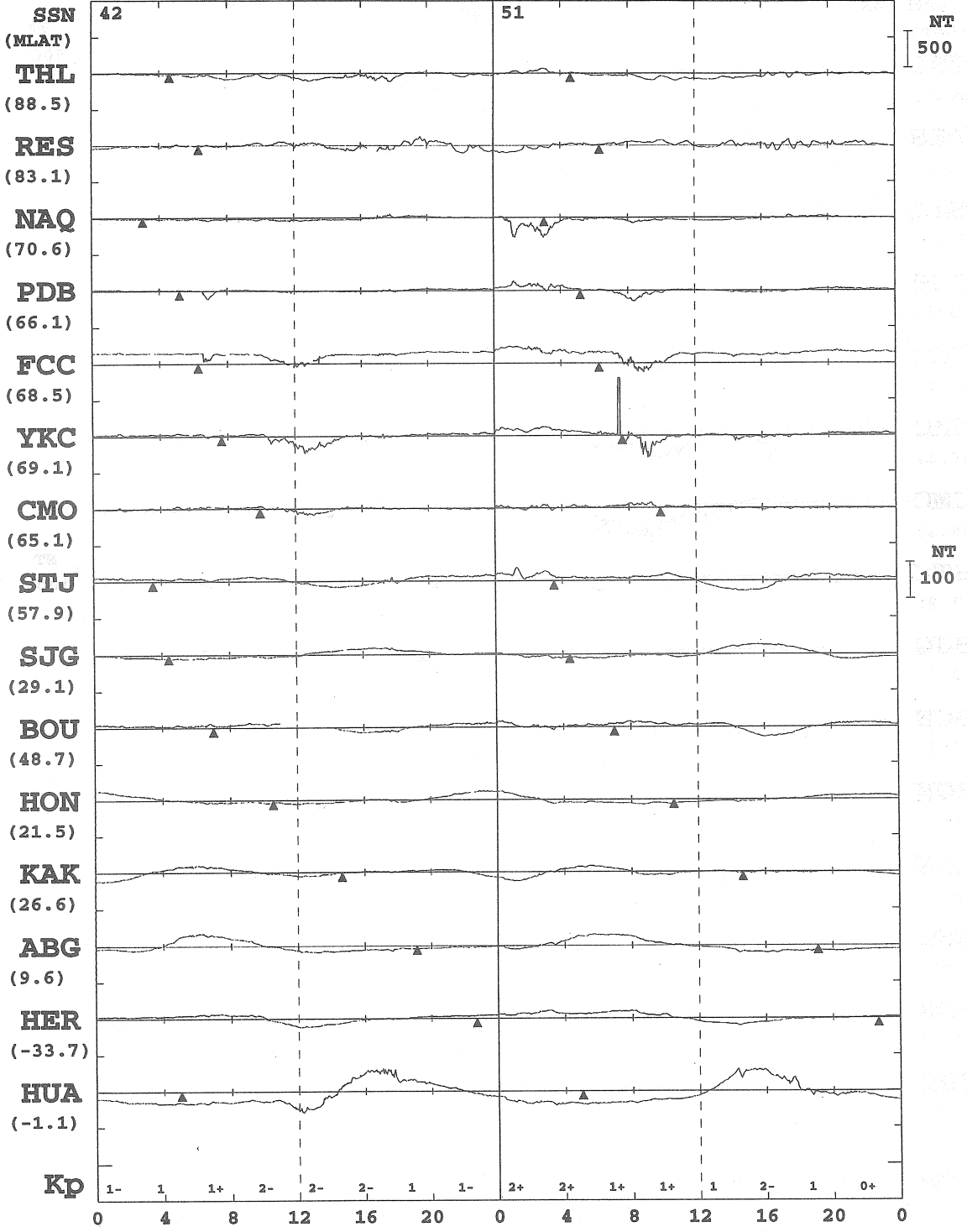
APR 22  
(DAY 112)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



**APR 23  
(DAY 113)**

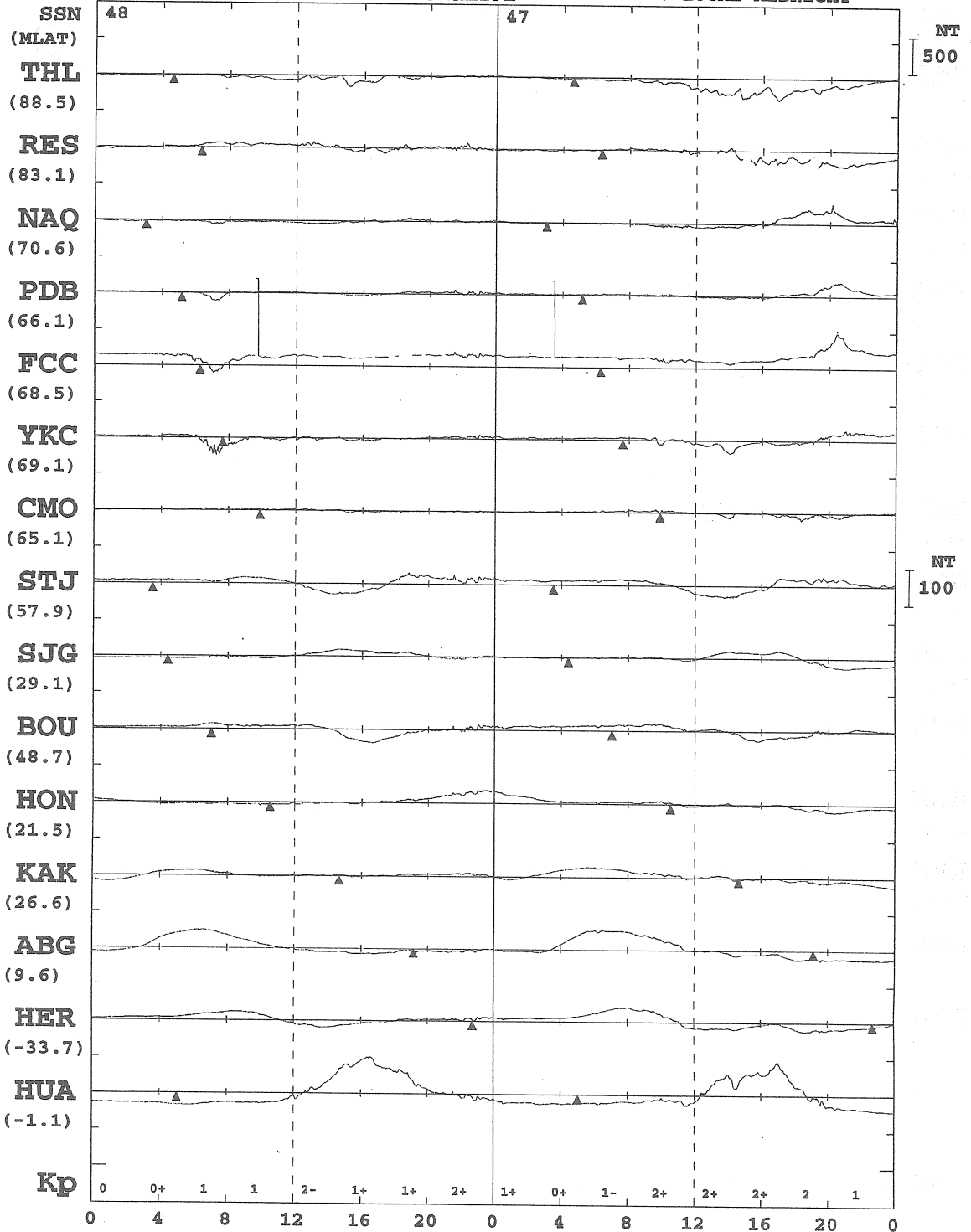
**APR 24  
(DAY 114)**

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



APR 25  
(DAY 115)

APR 26  
(DAY 116)

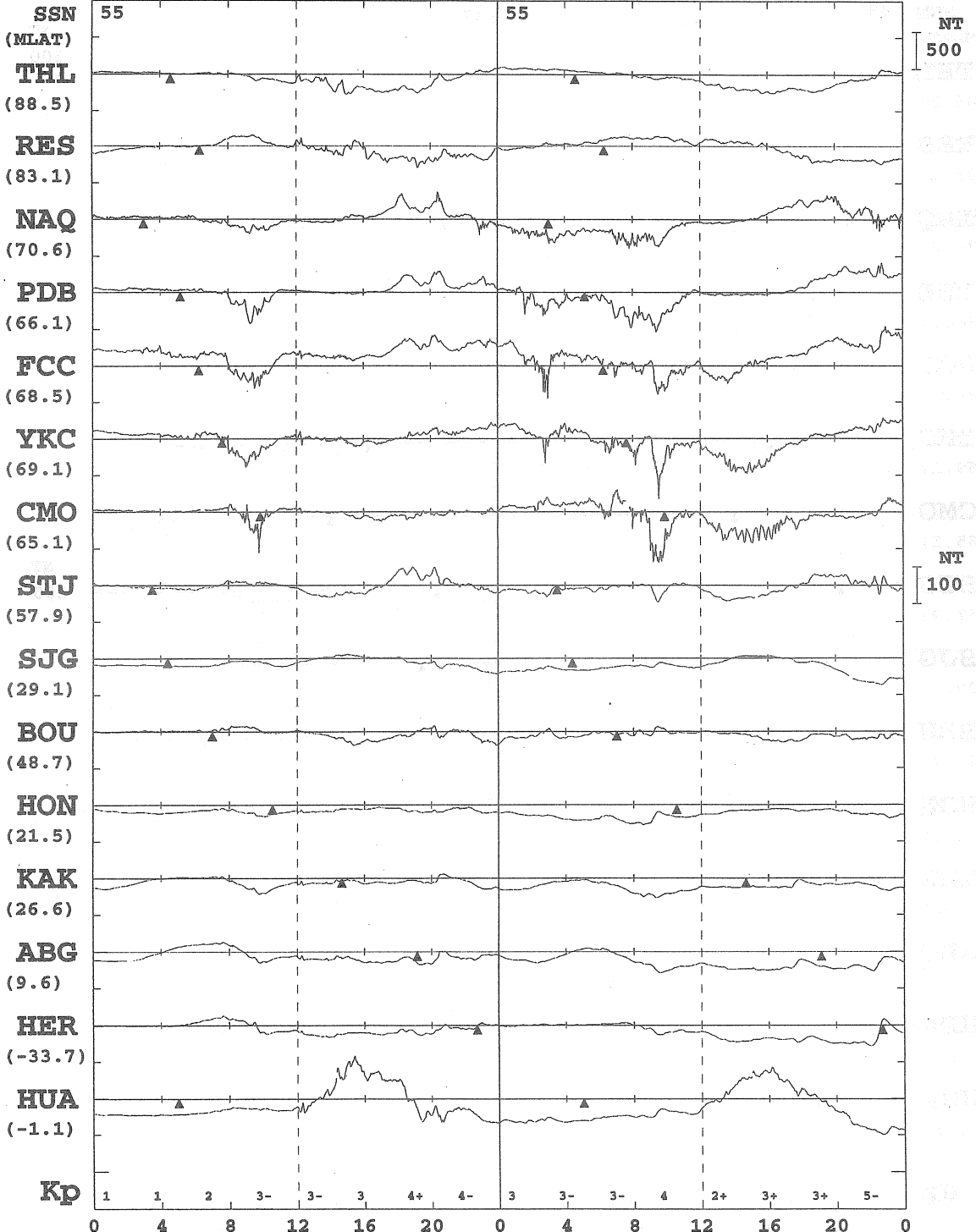
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999

H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



APR 27 (DAY 117)

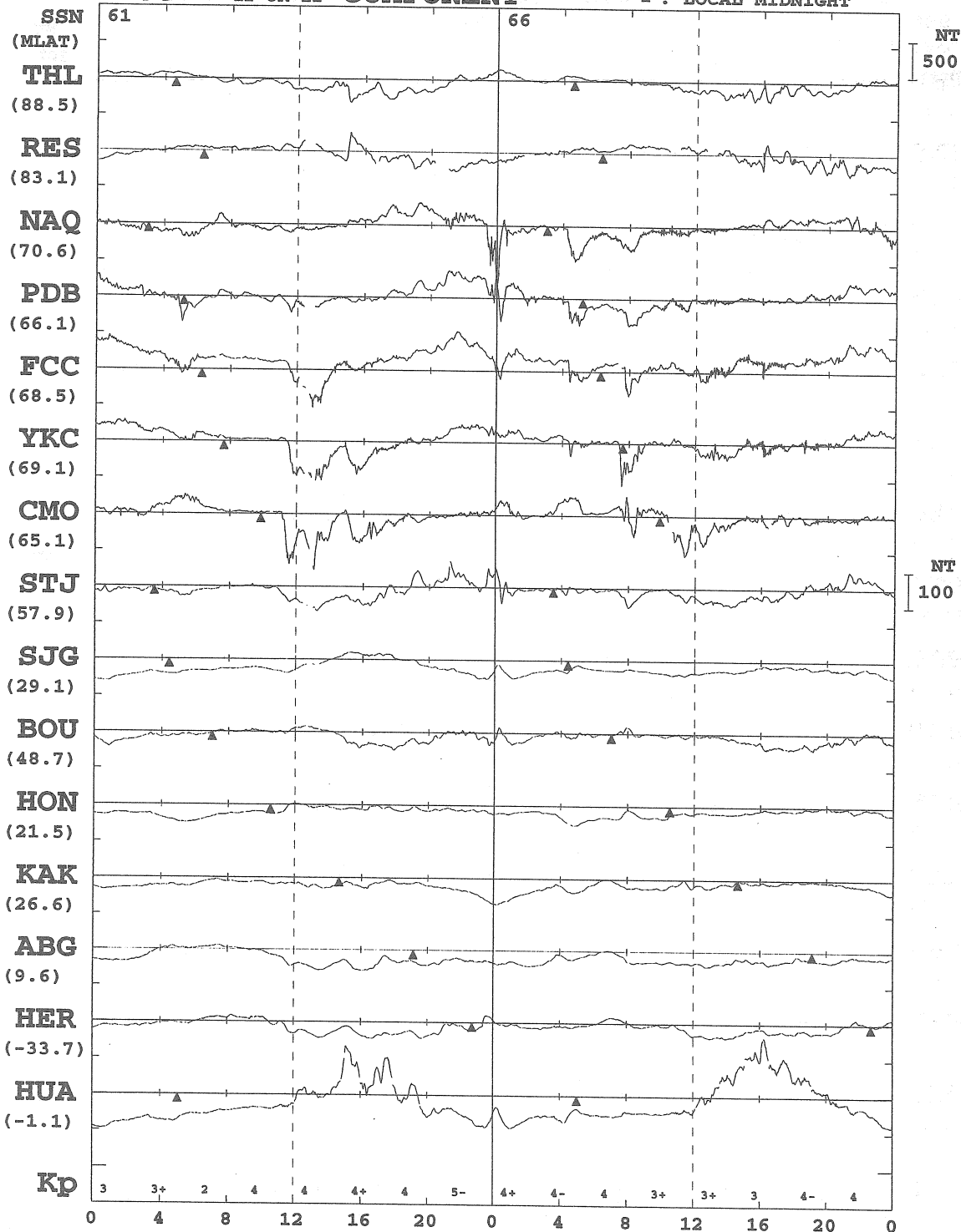
APR 28 (DAY 118)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED.  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



APR 29  
(DAY 119)

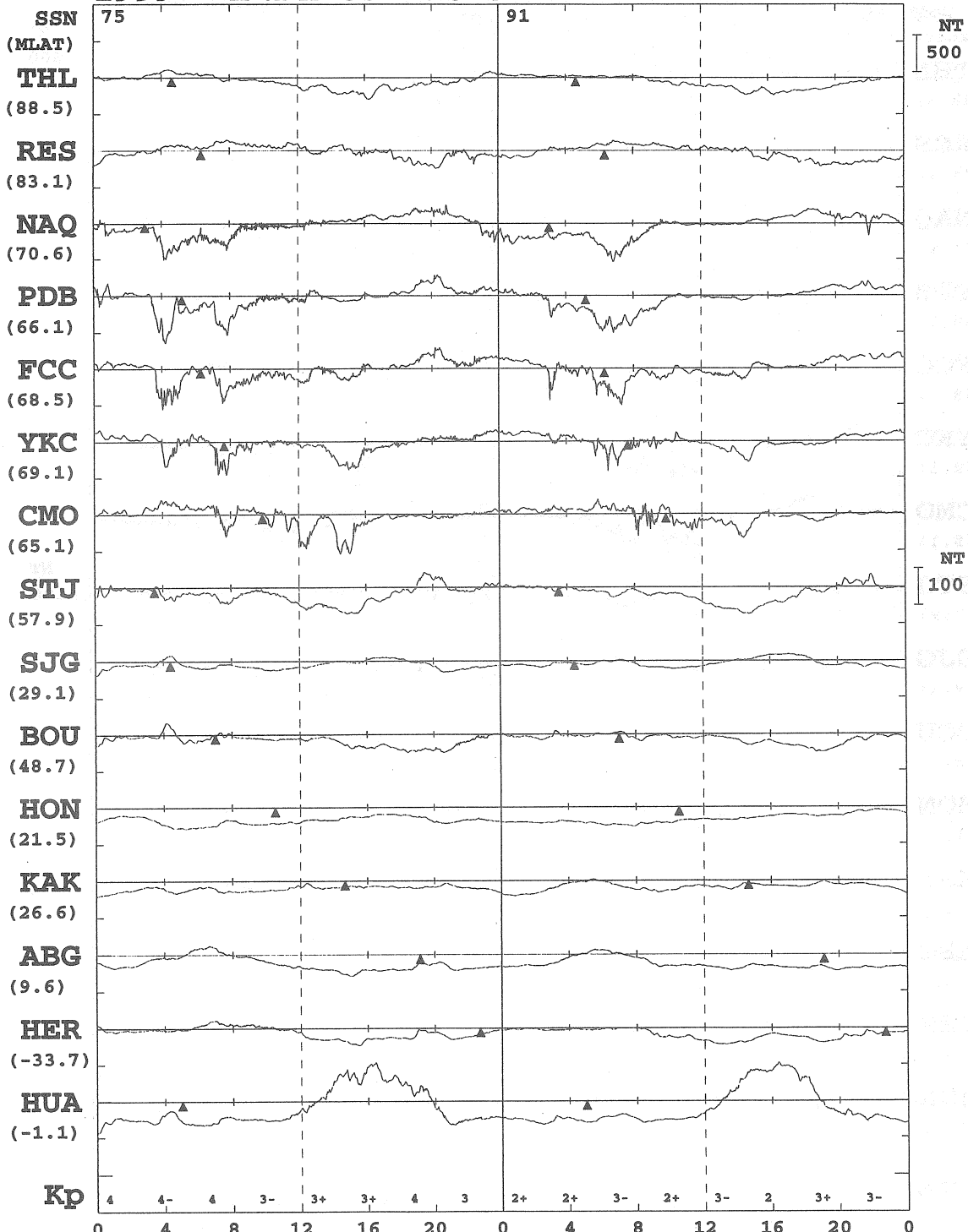
APR 30  
(DAY 120)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAY 1  
(DAY 121)

MAY 2  
(DAY 122)

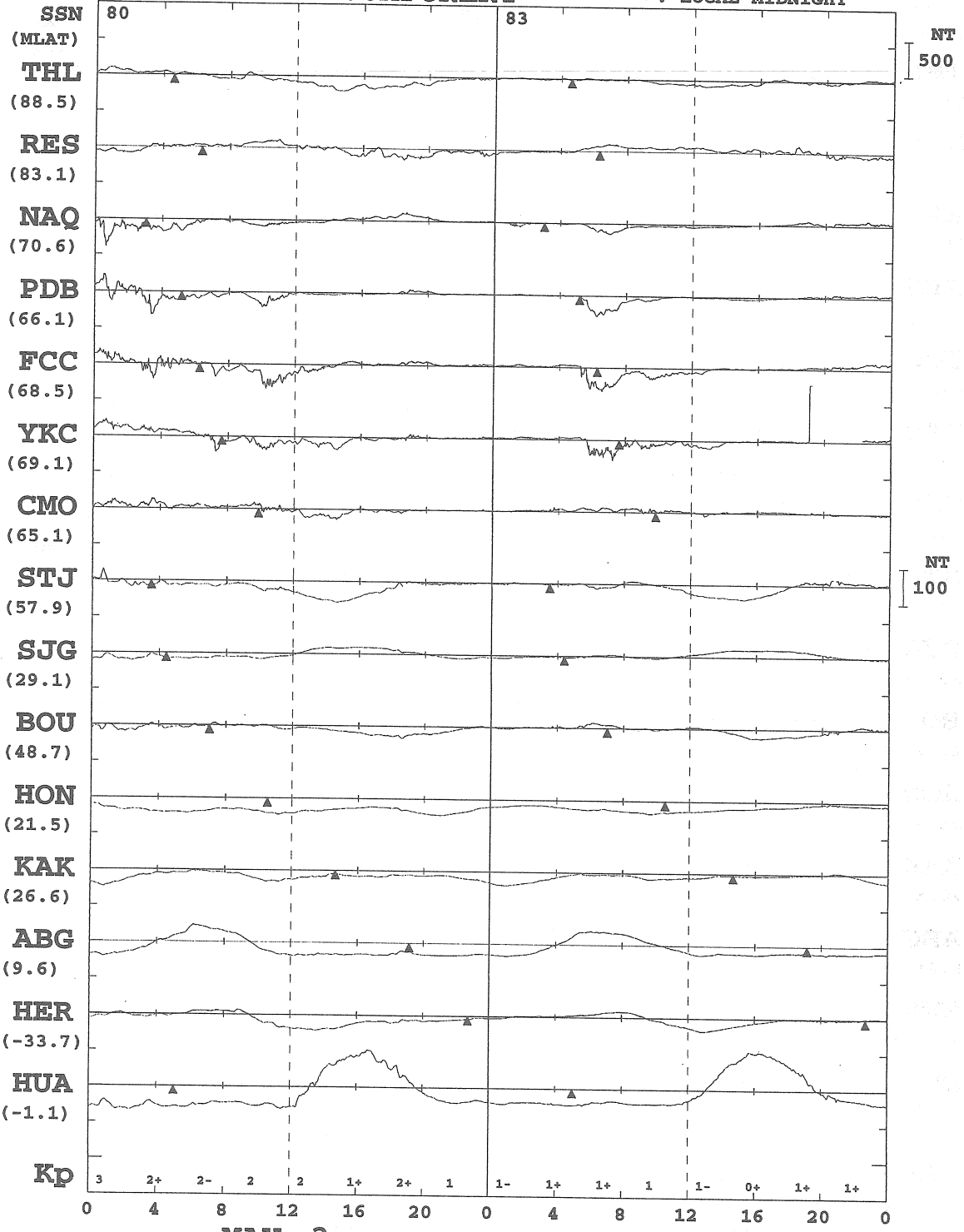
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



**MAY 3  
(DAY 123)**

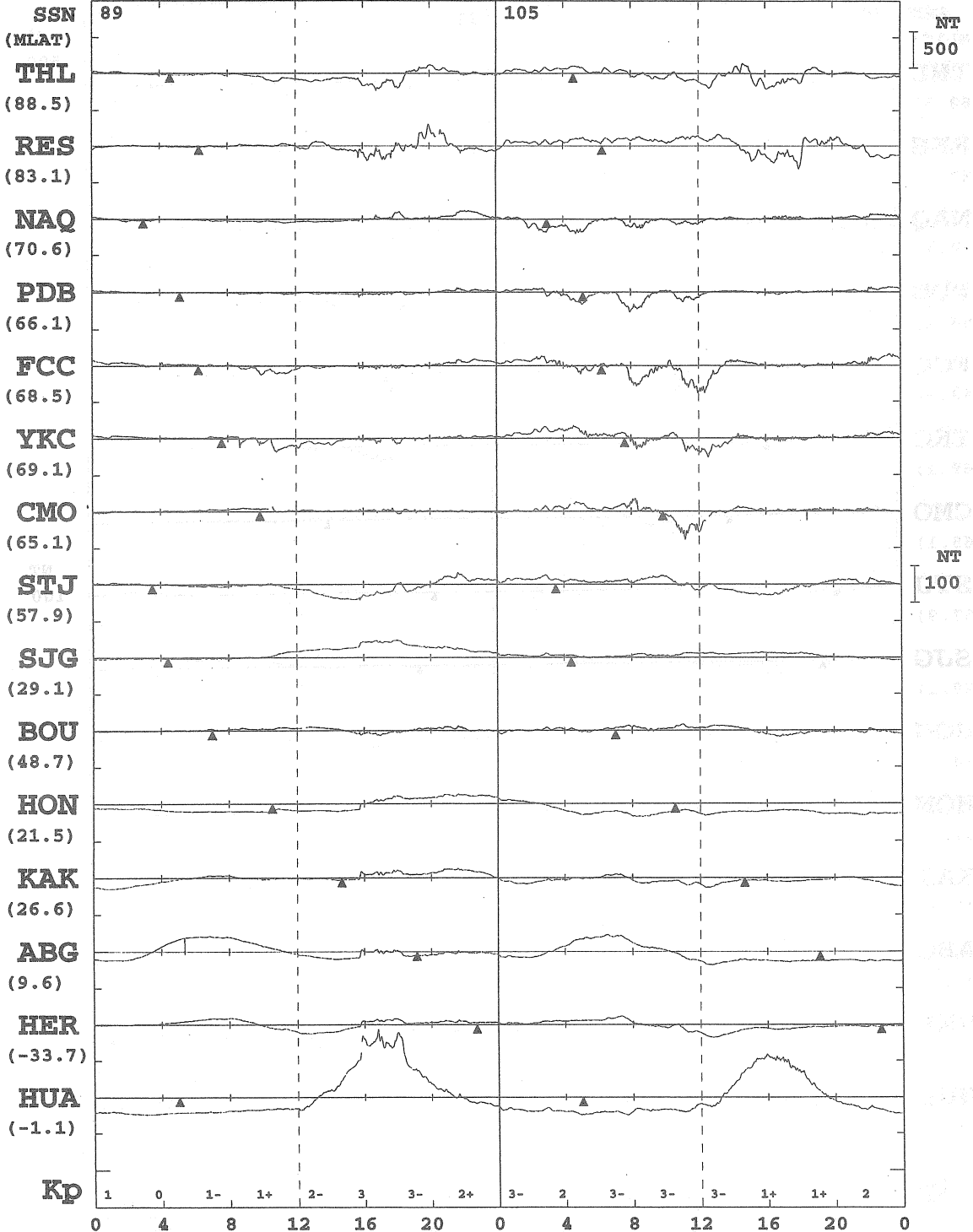
**MAY 4  
(DAY 124)**

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAY 5  
(DAY 125)

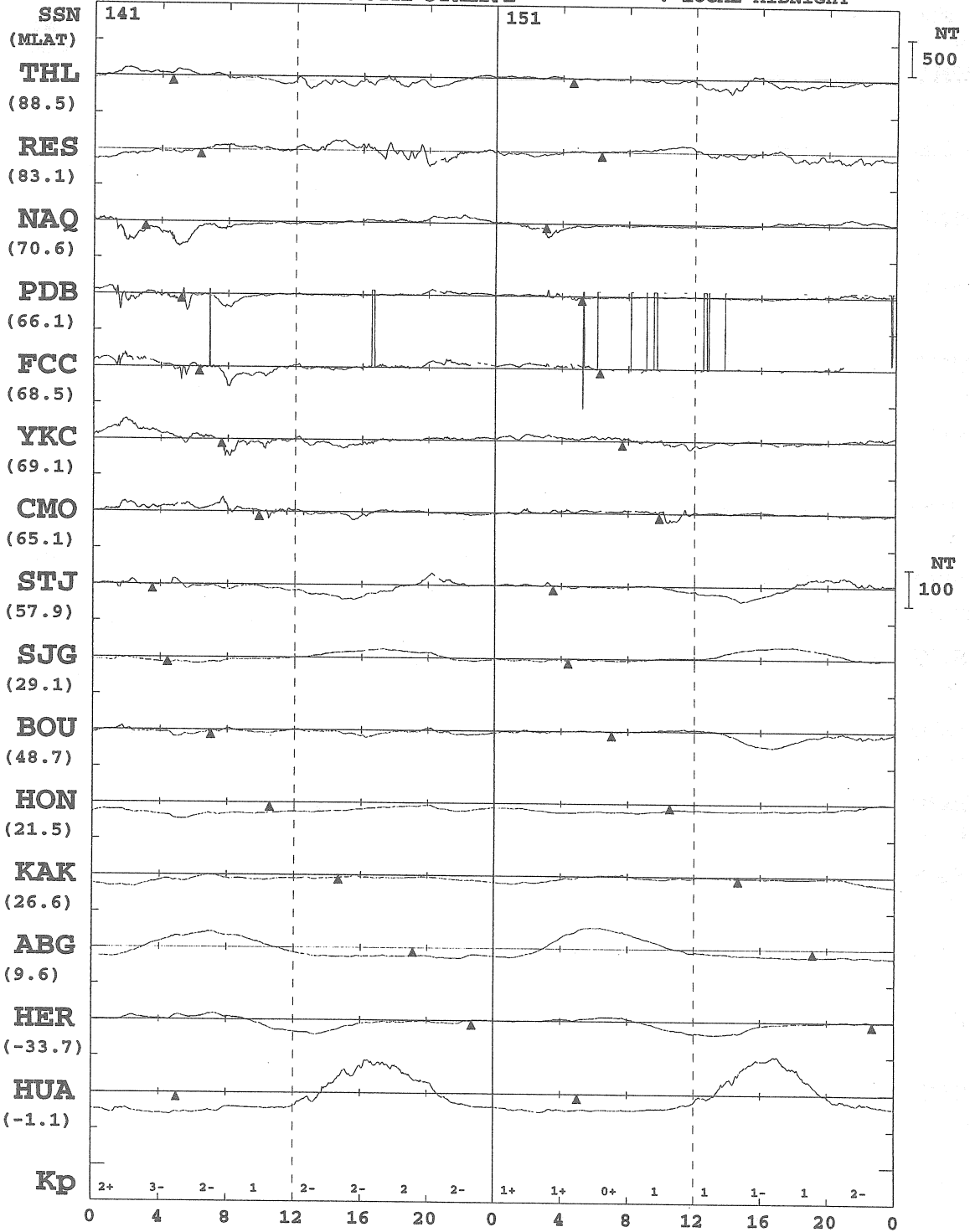
MAY 6  
(DAY 126)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAY 7  
(DAY 127)

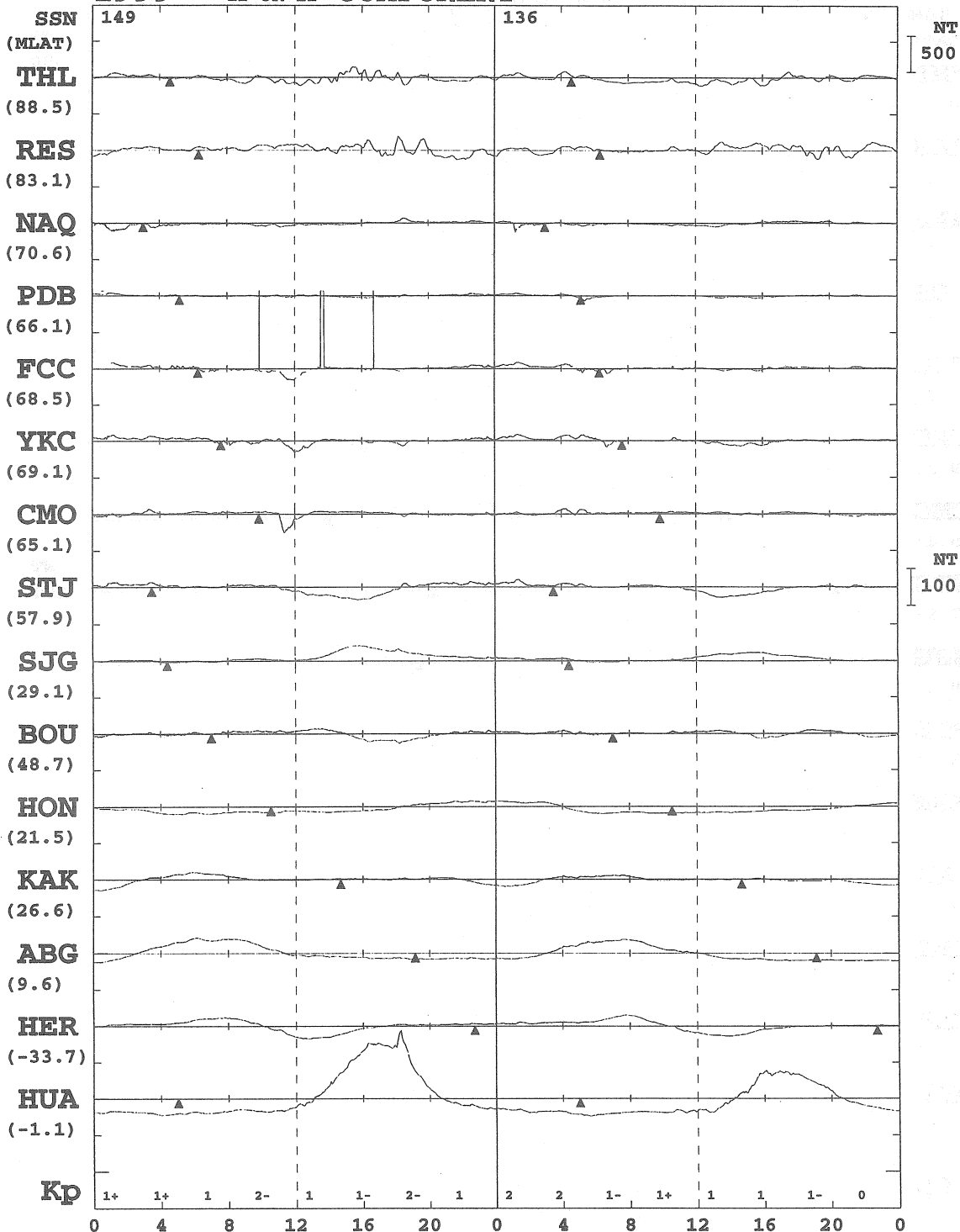
MAY 8  
(DAY 128)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAY 9  
(DAY 129)

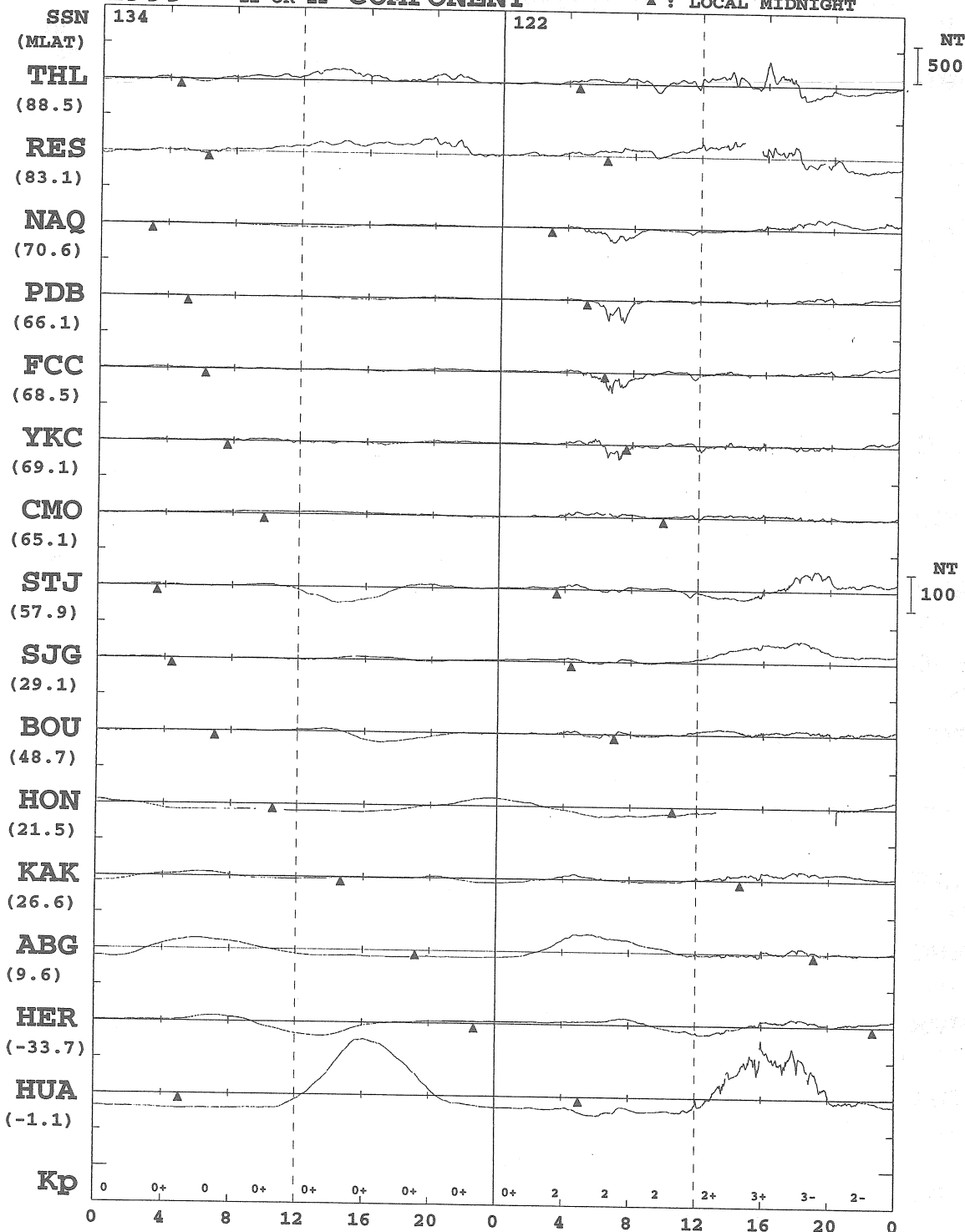
MAY 10  
(DAY 130)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



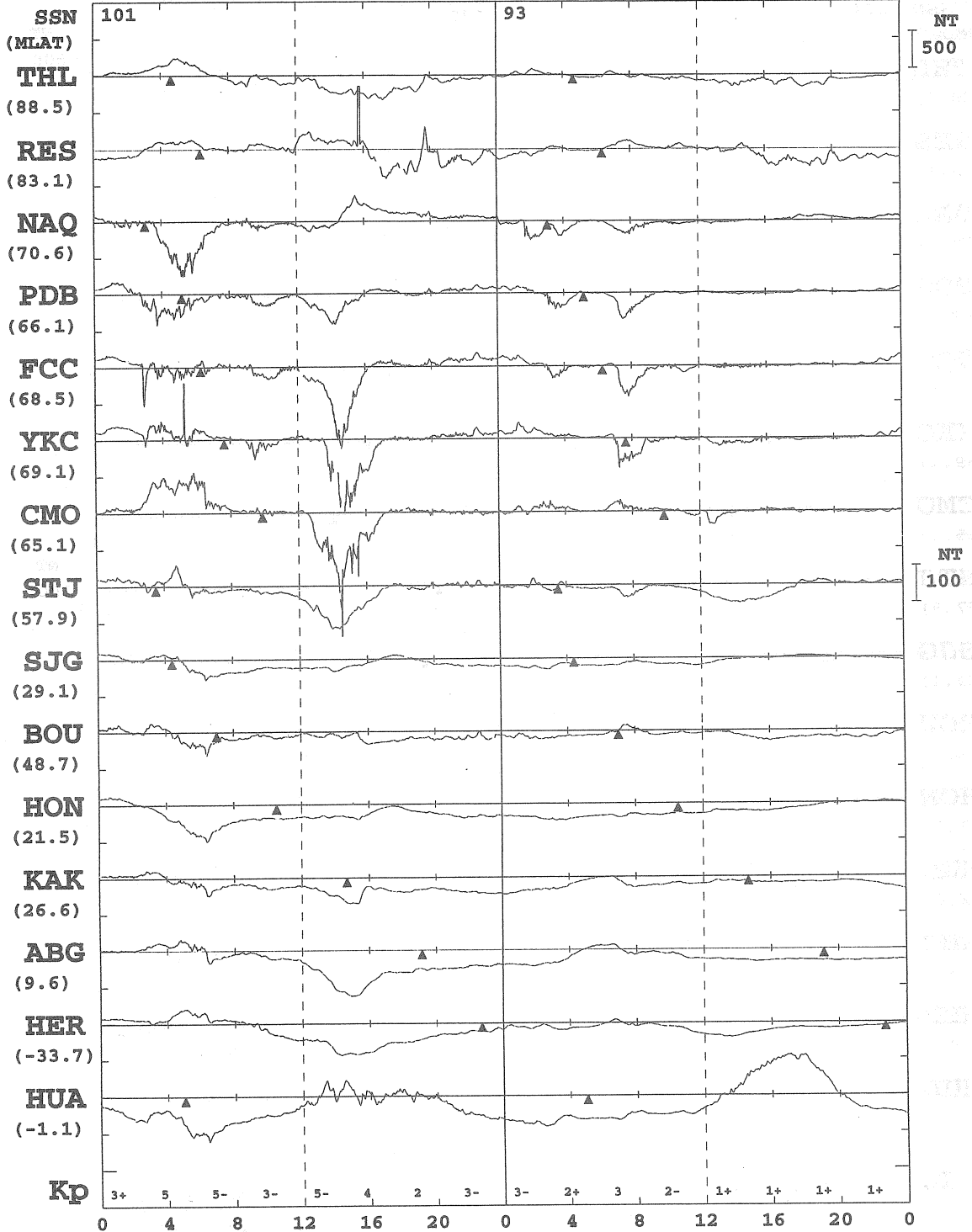
MAY 11  
(DAY 131)

MAY 12  
(DAY 132)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
\* PROMPT DATA ARE INCLUDED  
\* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT LOCAL MIDNIGHT



MAY 13  
(DAY 133)

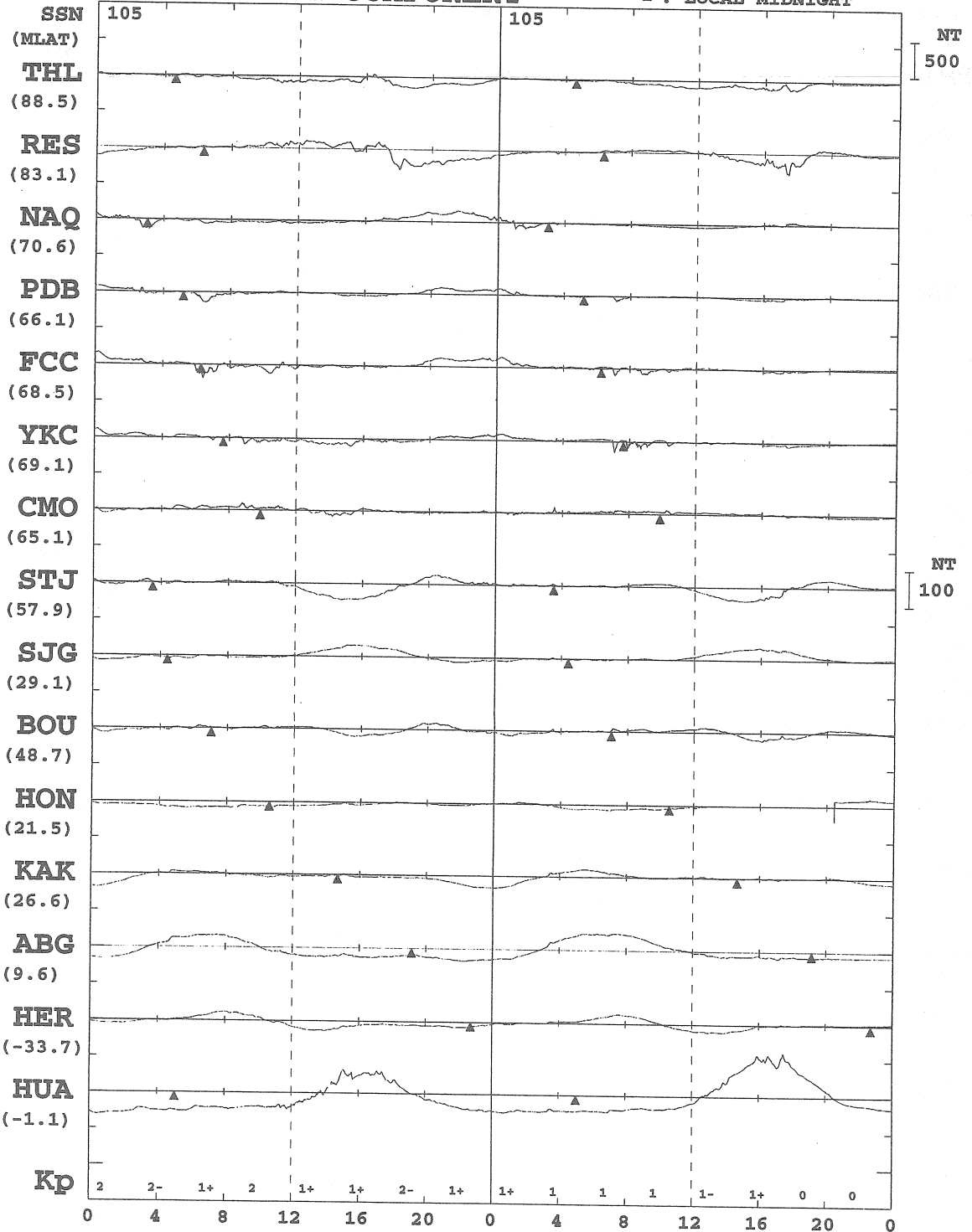
MAY 14  
(DAY 134)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAY 15  
(DAY 135)

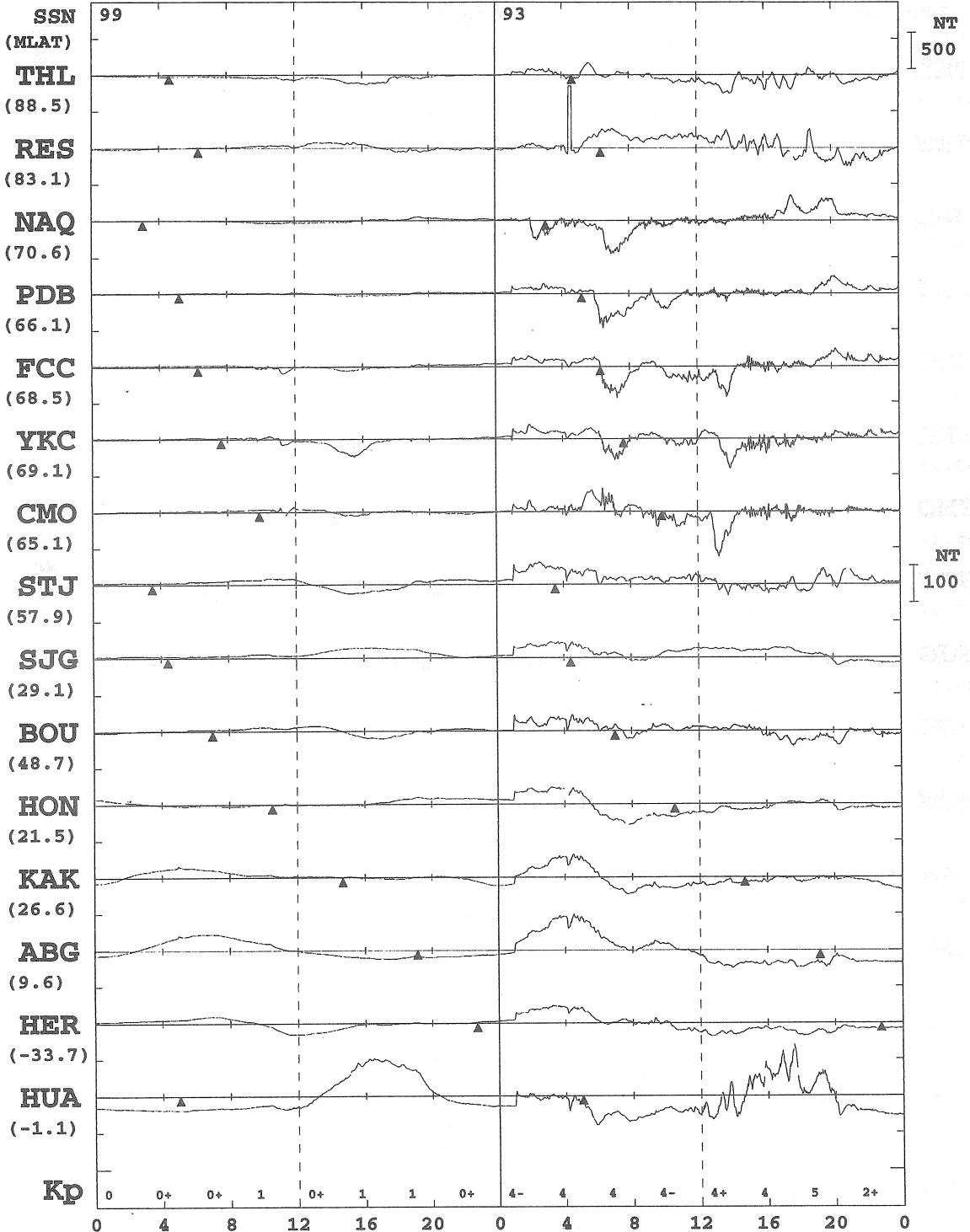
MAY 16  
(DAY 136)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



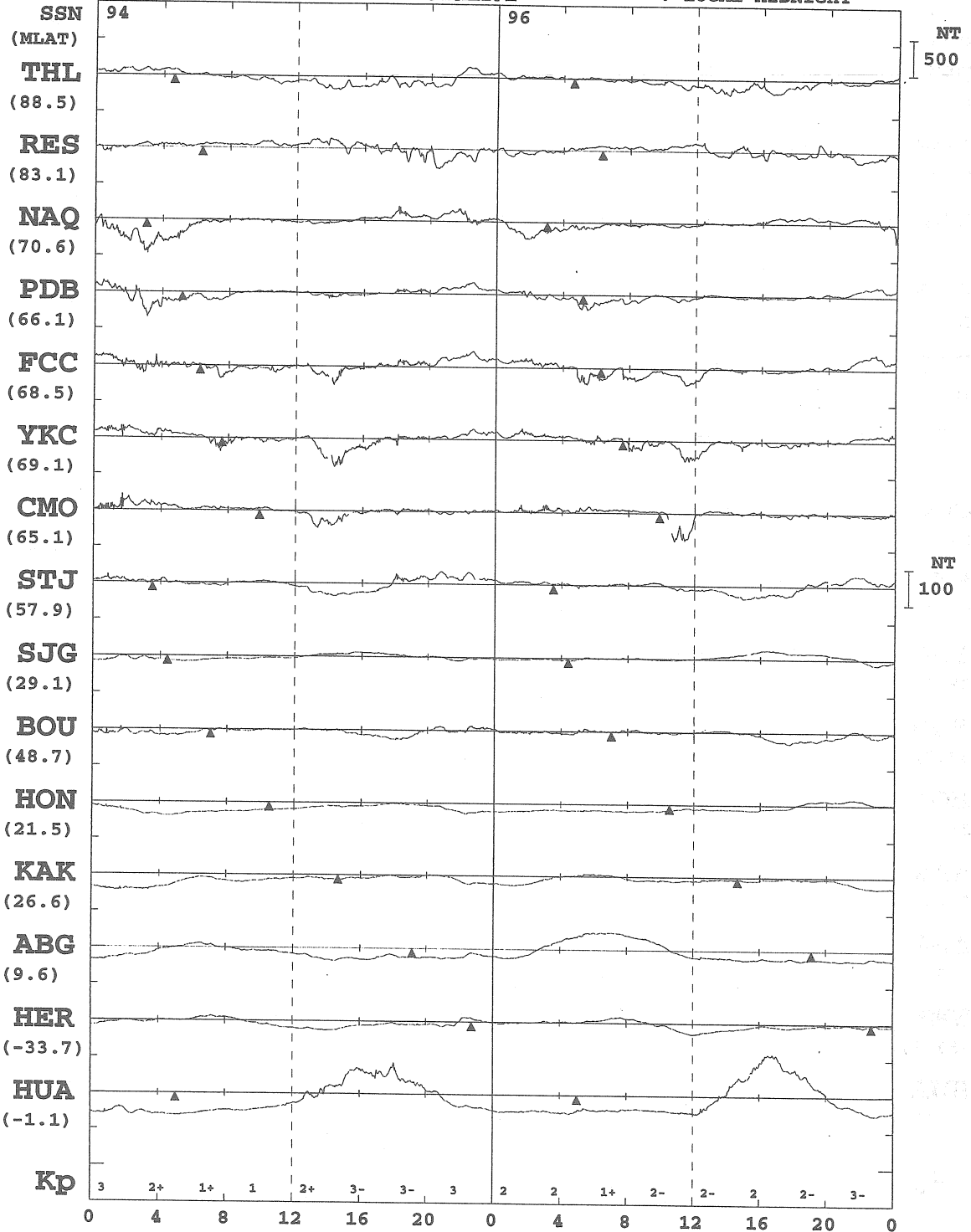
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



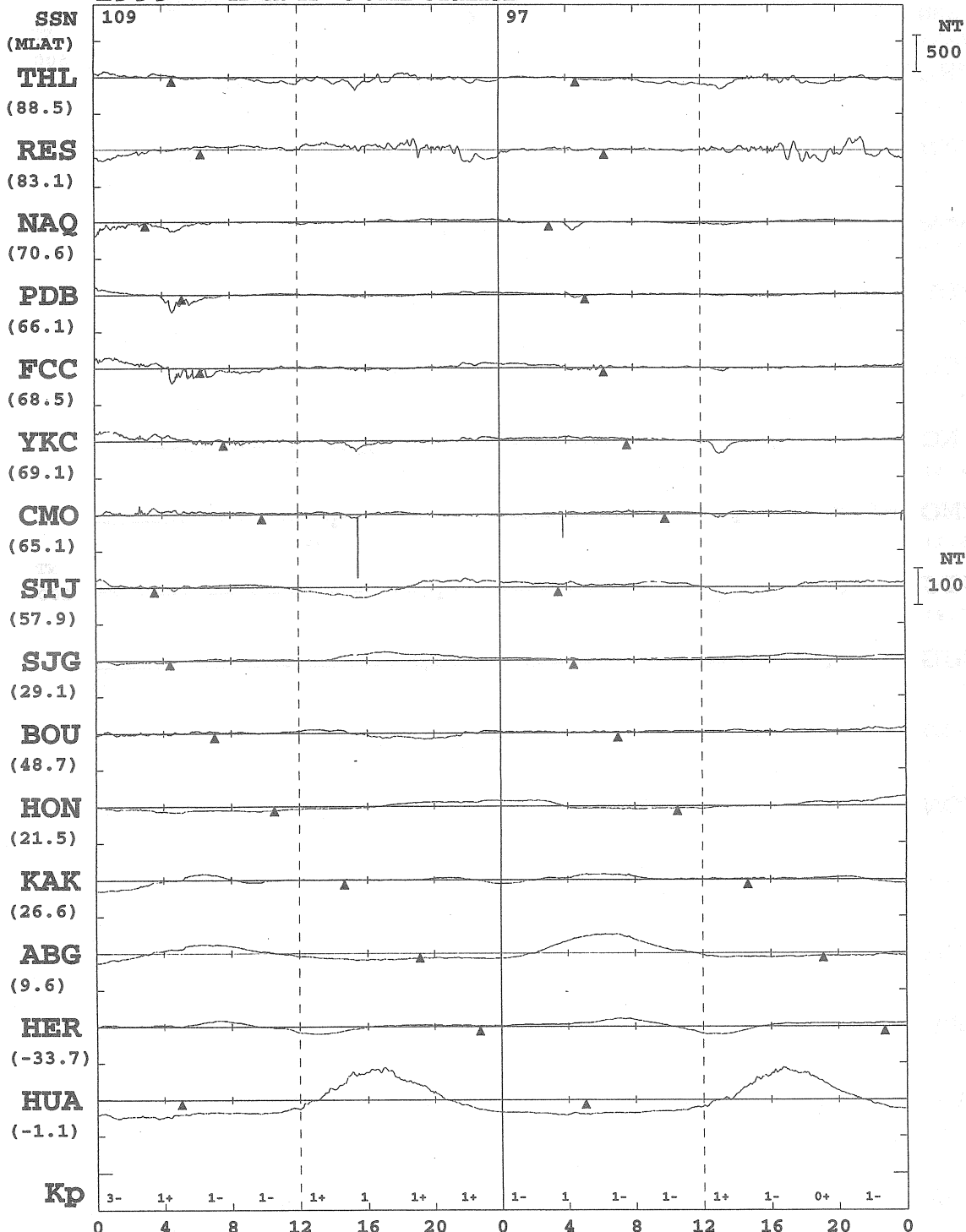
**MAY 19  
(DAY 139)**

**MAY 20  
(DAY 140)**

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



MAY 21  
(DAY 141)

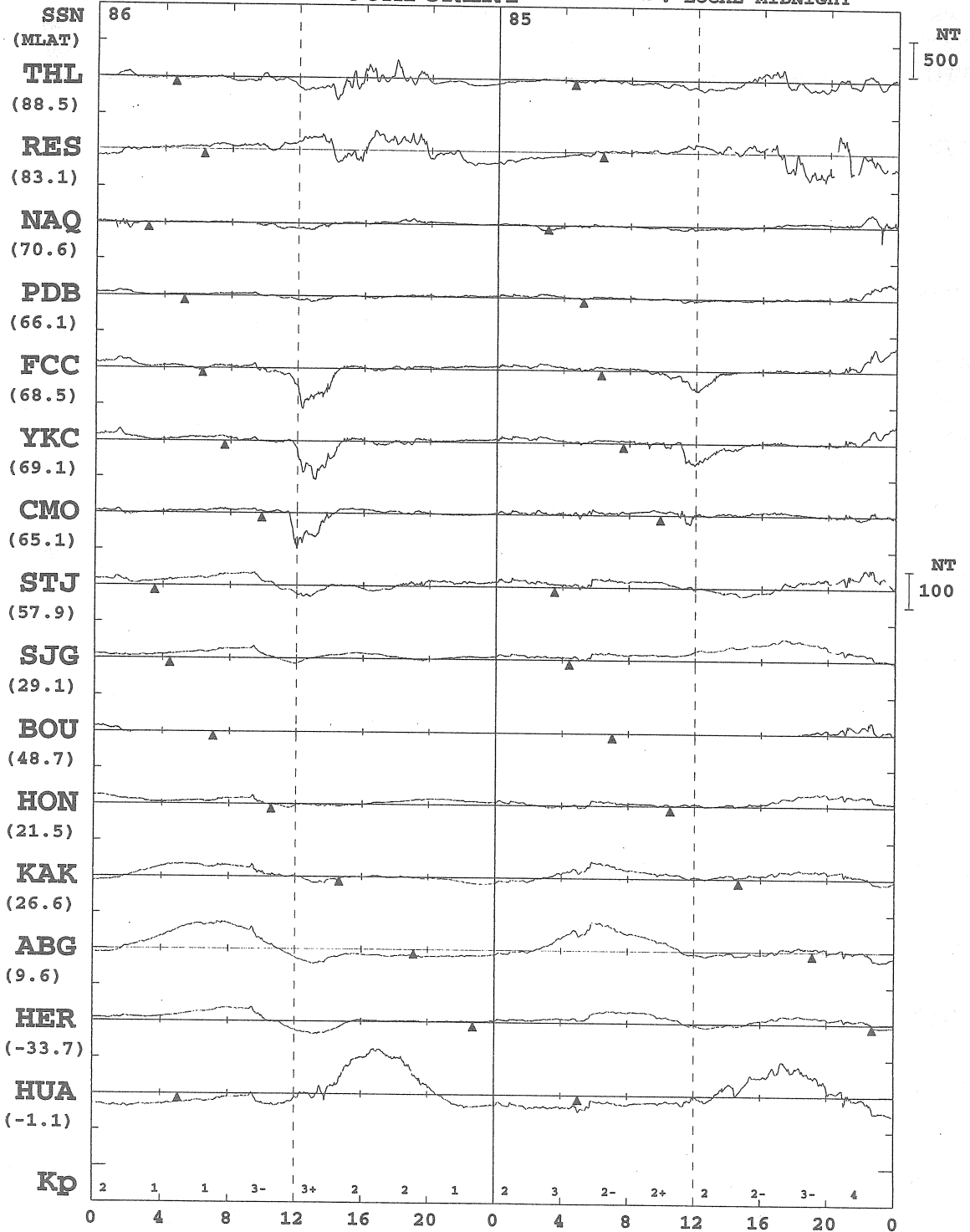
MAY 22  
(DAY 142)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
\* PROMPT DATA ARE INCLUDED  
\* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



**MAY 23**  
(DAY 143)

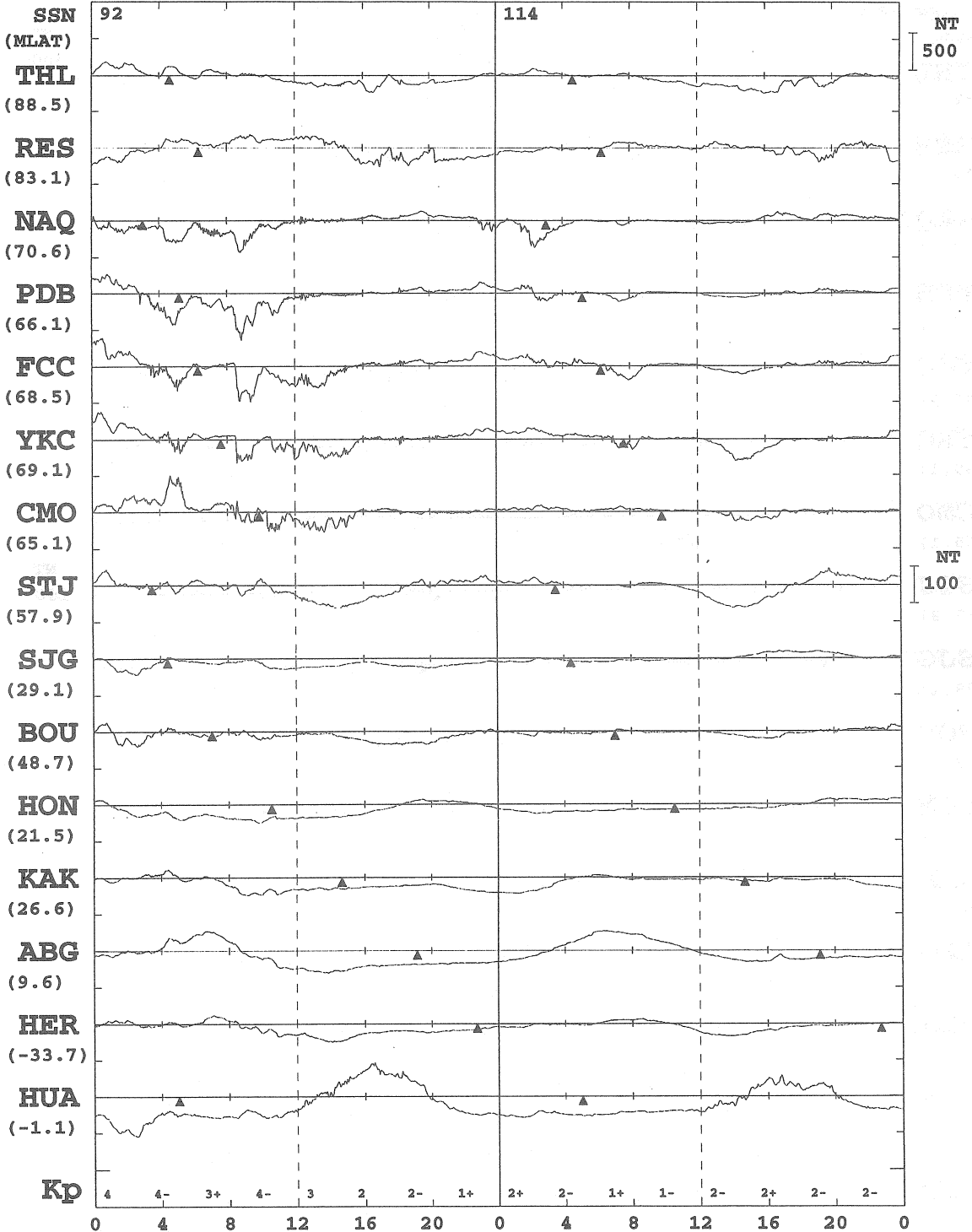
**MAY 24**  
(DAY 144)

- \* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
- \* PROMPT DATA ARE INCLUDED
- \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



MAY 25  
(DAY 145)

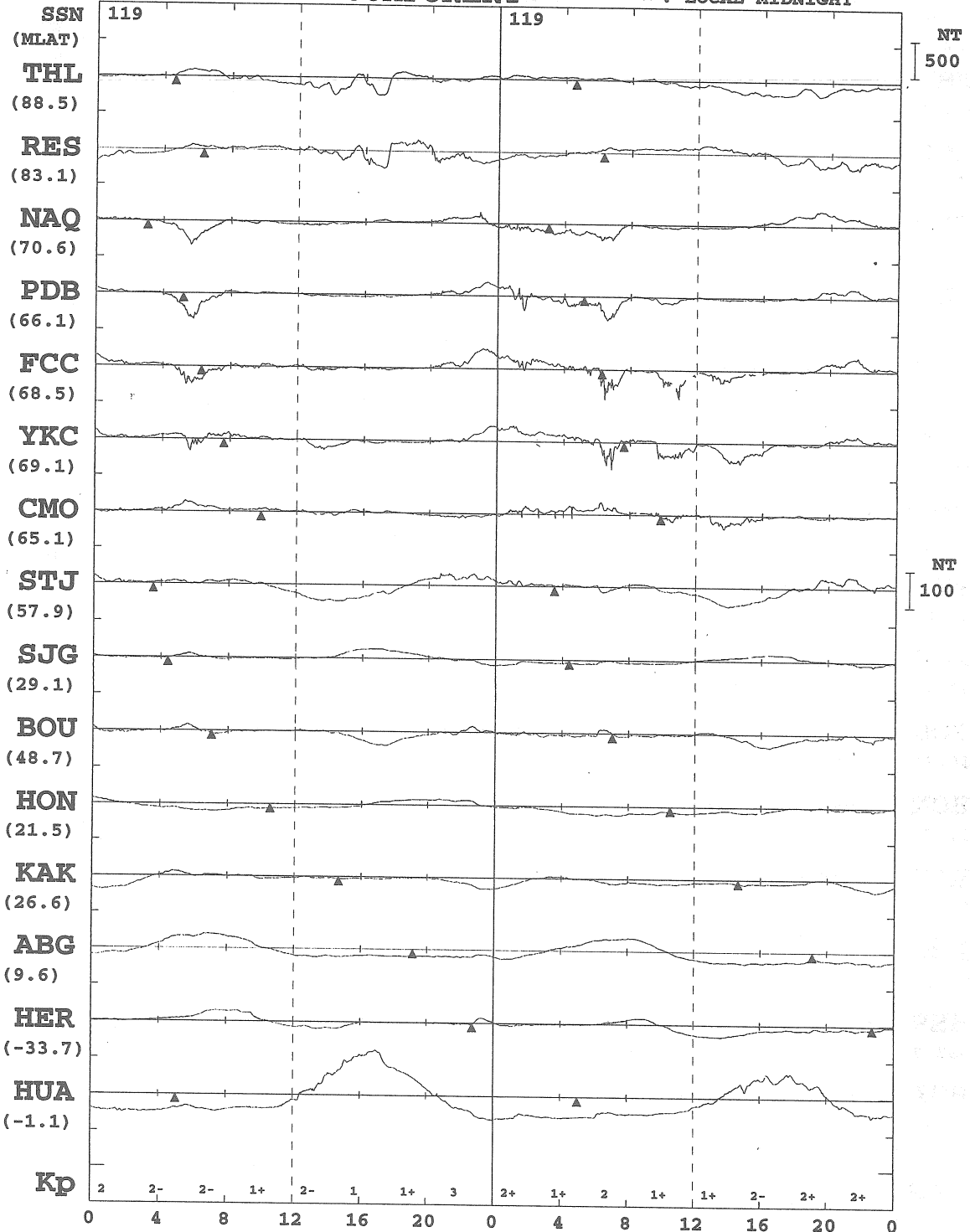
MAY 26  
(DAY 146)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



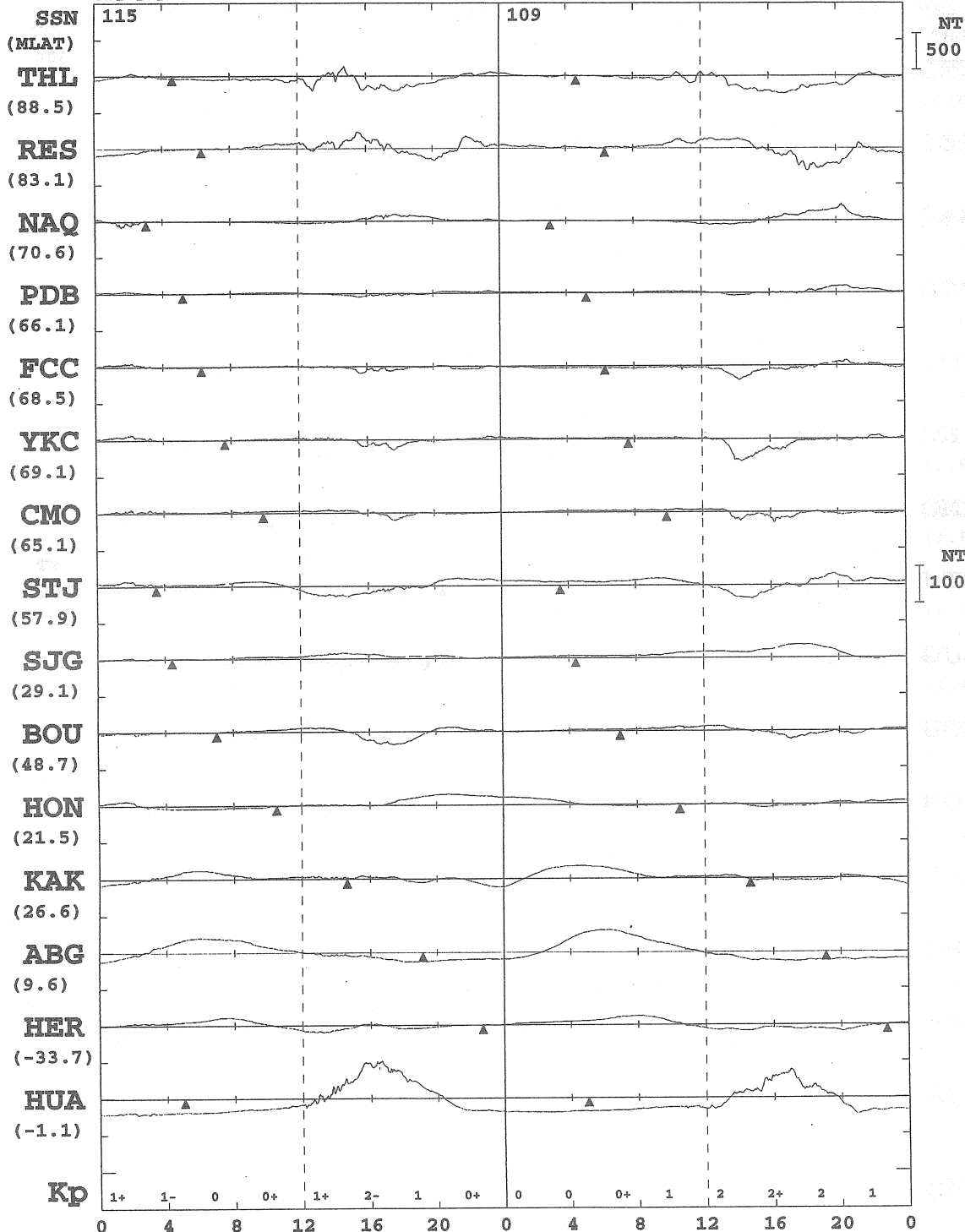
**MAY 27**  
(DAY 147)

**MAY 28**  
(DAY 148)

- \* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
- \* PROMPT DATA ARE INCLUDED
- \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



MAY 29  
(DAY 149)

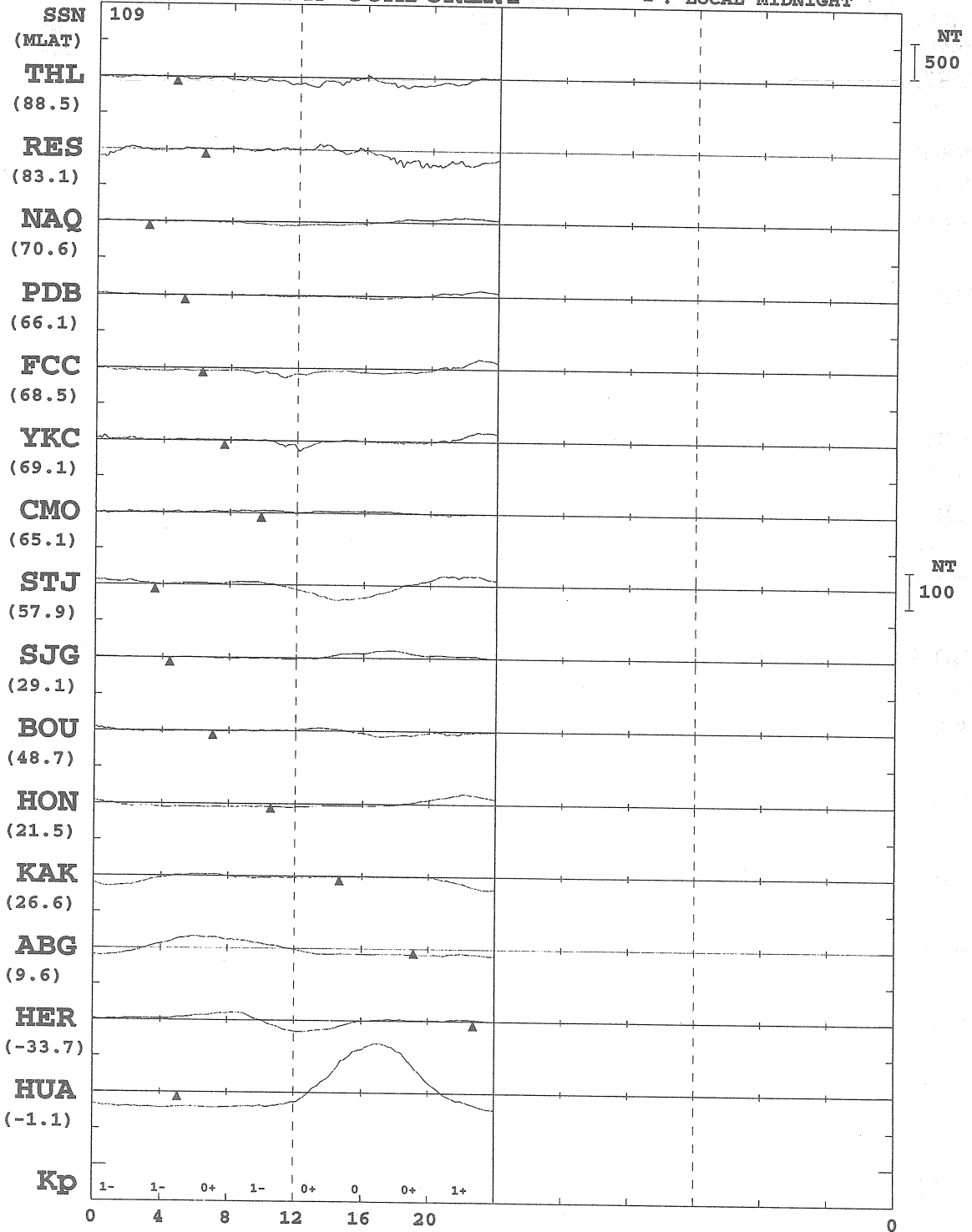
MAY 30  
(DAY 150)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



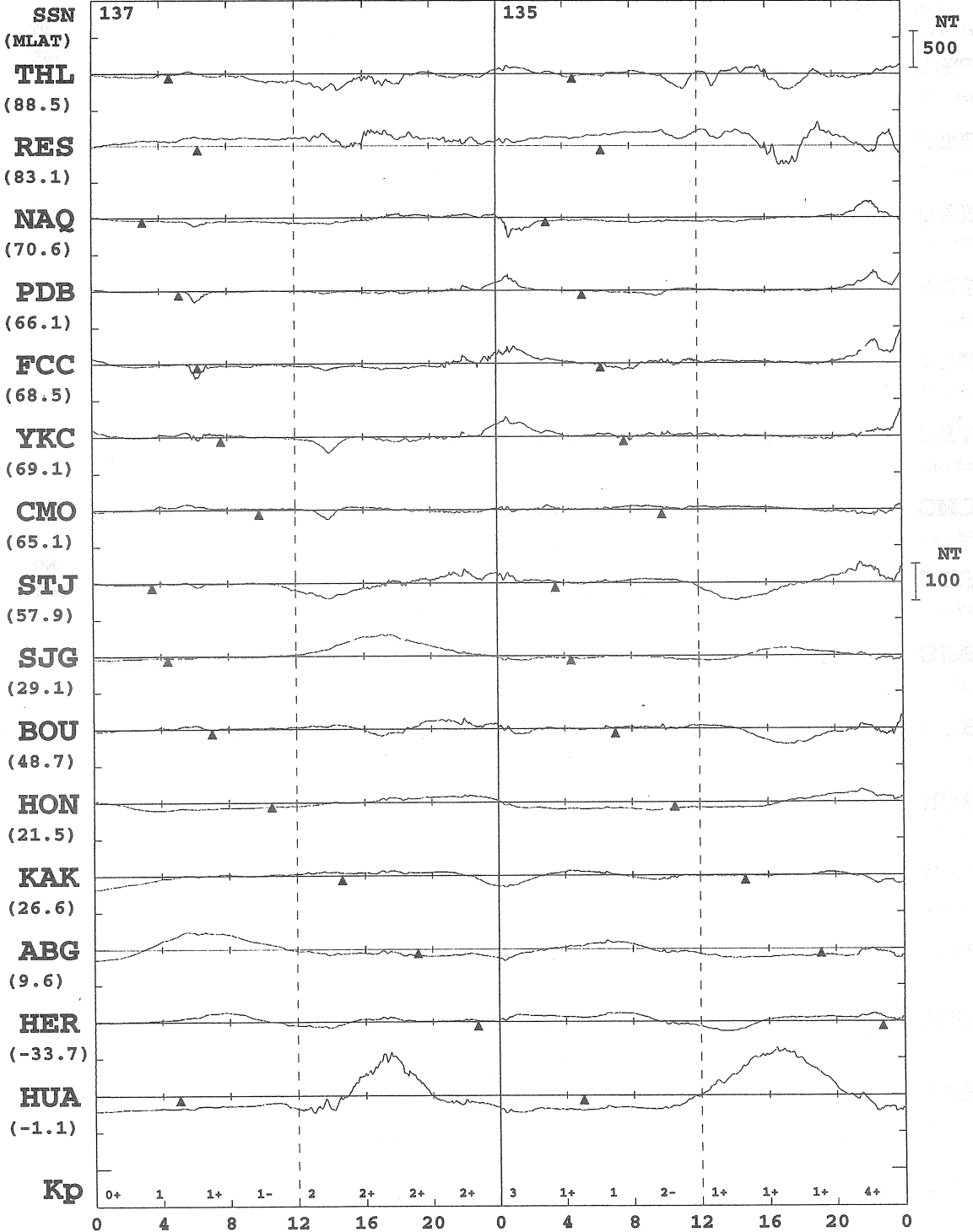
**MAY 31**  
(DAY 151)

- \* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
- \* PROMPT DATA ARE INCLUDED
- \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



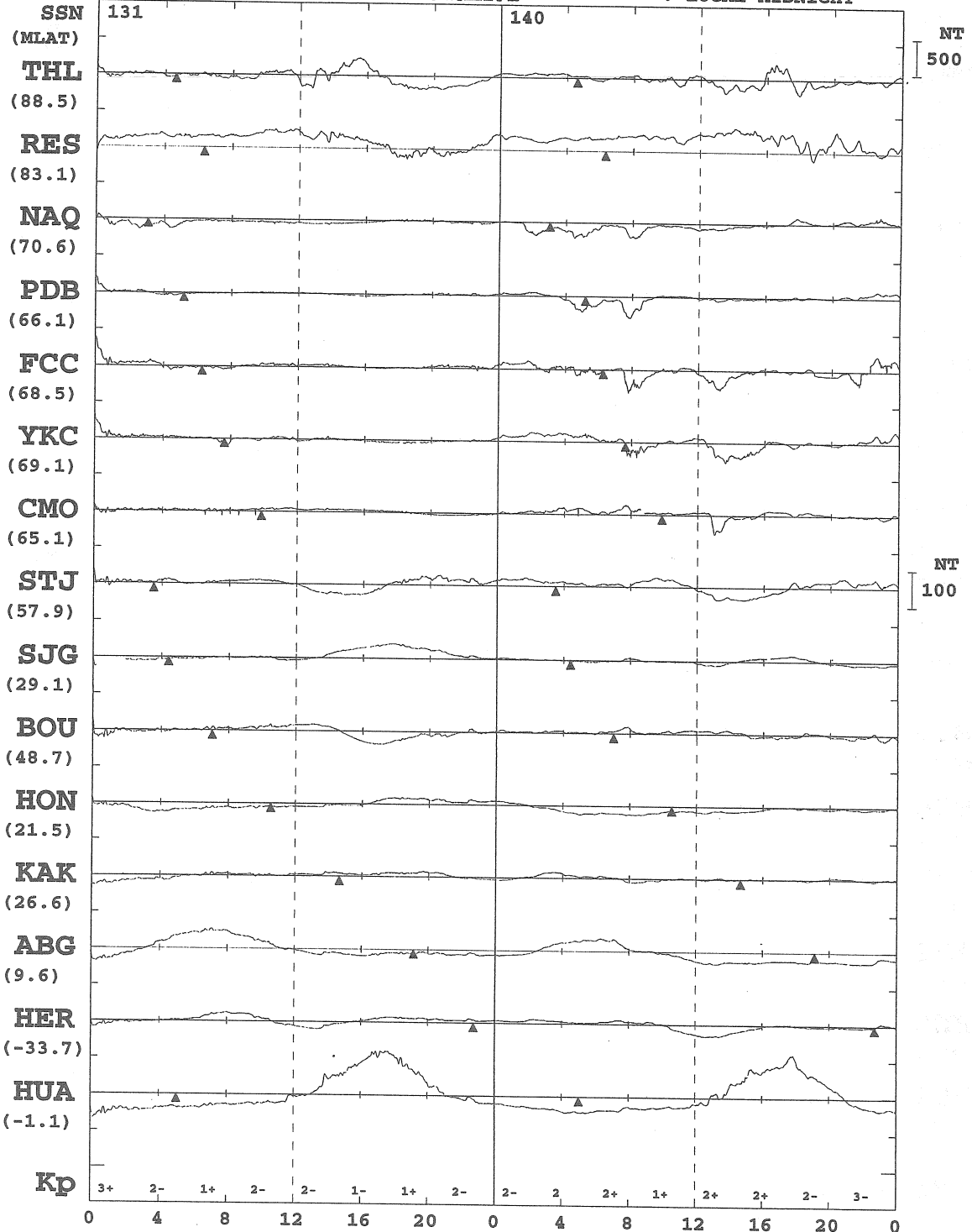
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

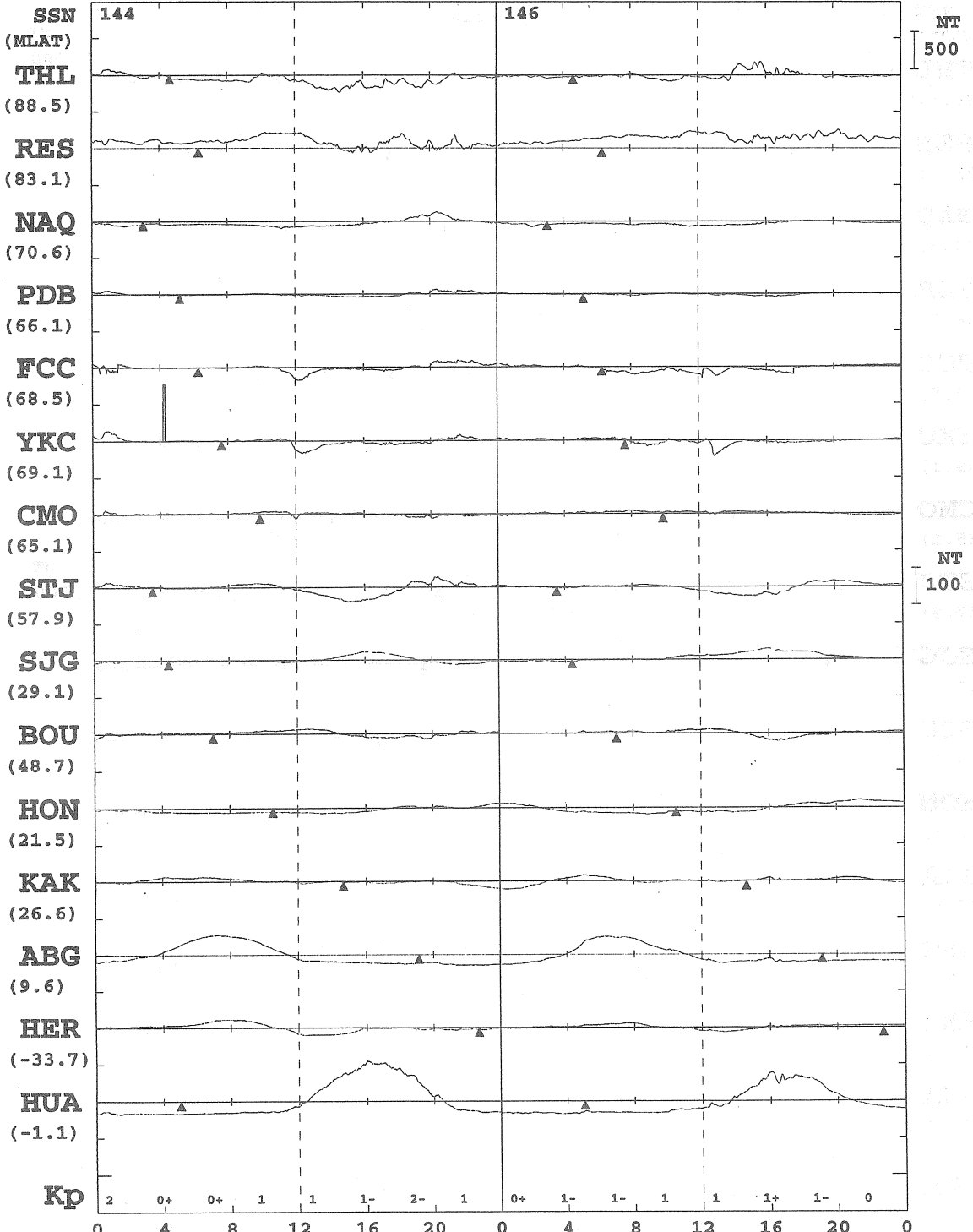


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



**JUN 5  
(DAY 156)**

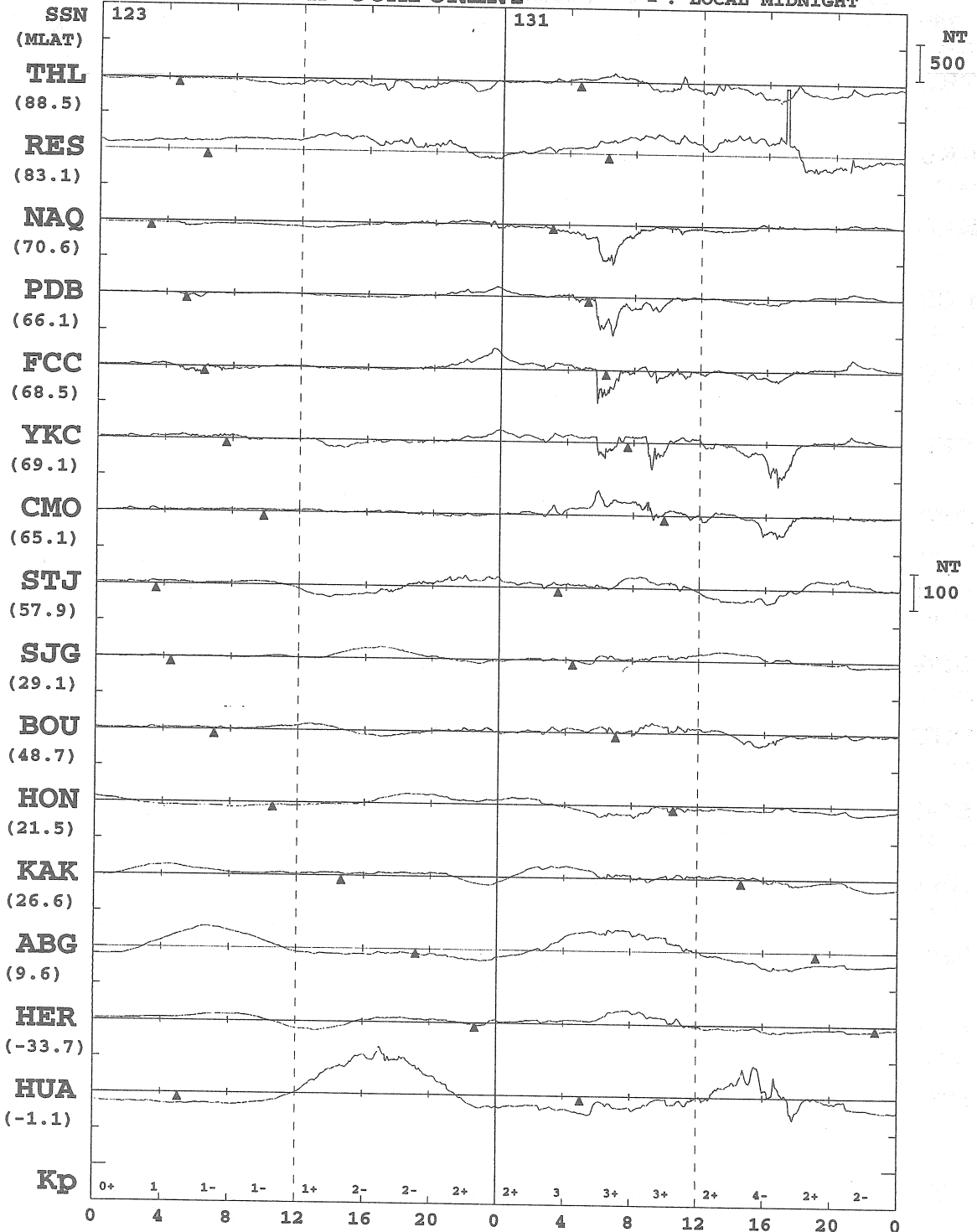
**JUN 6  
(DAY 157)**

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUN 7  
(DAY 158)

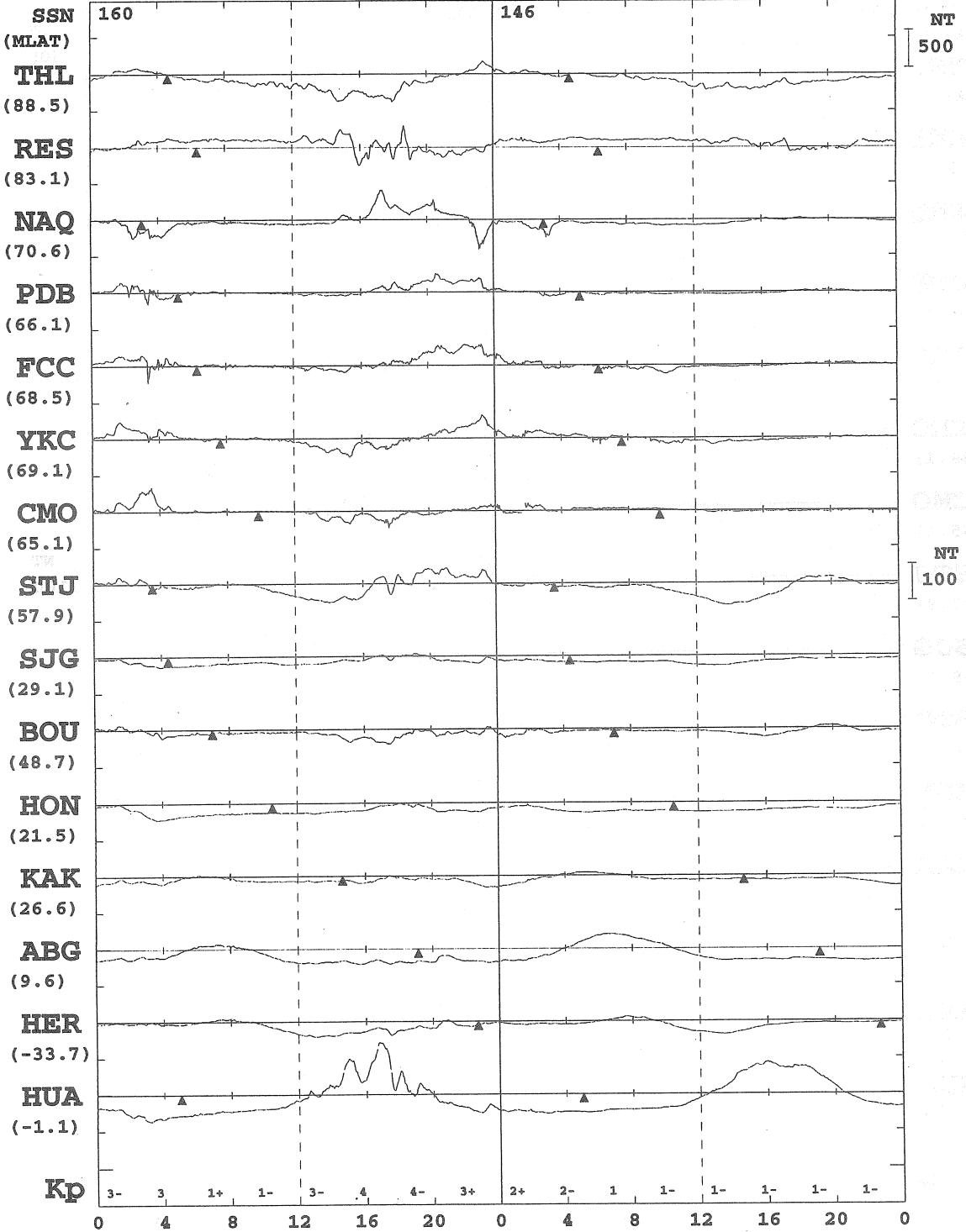
JUN 8  
(DAY 159)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

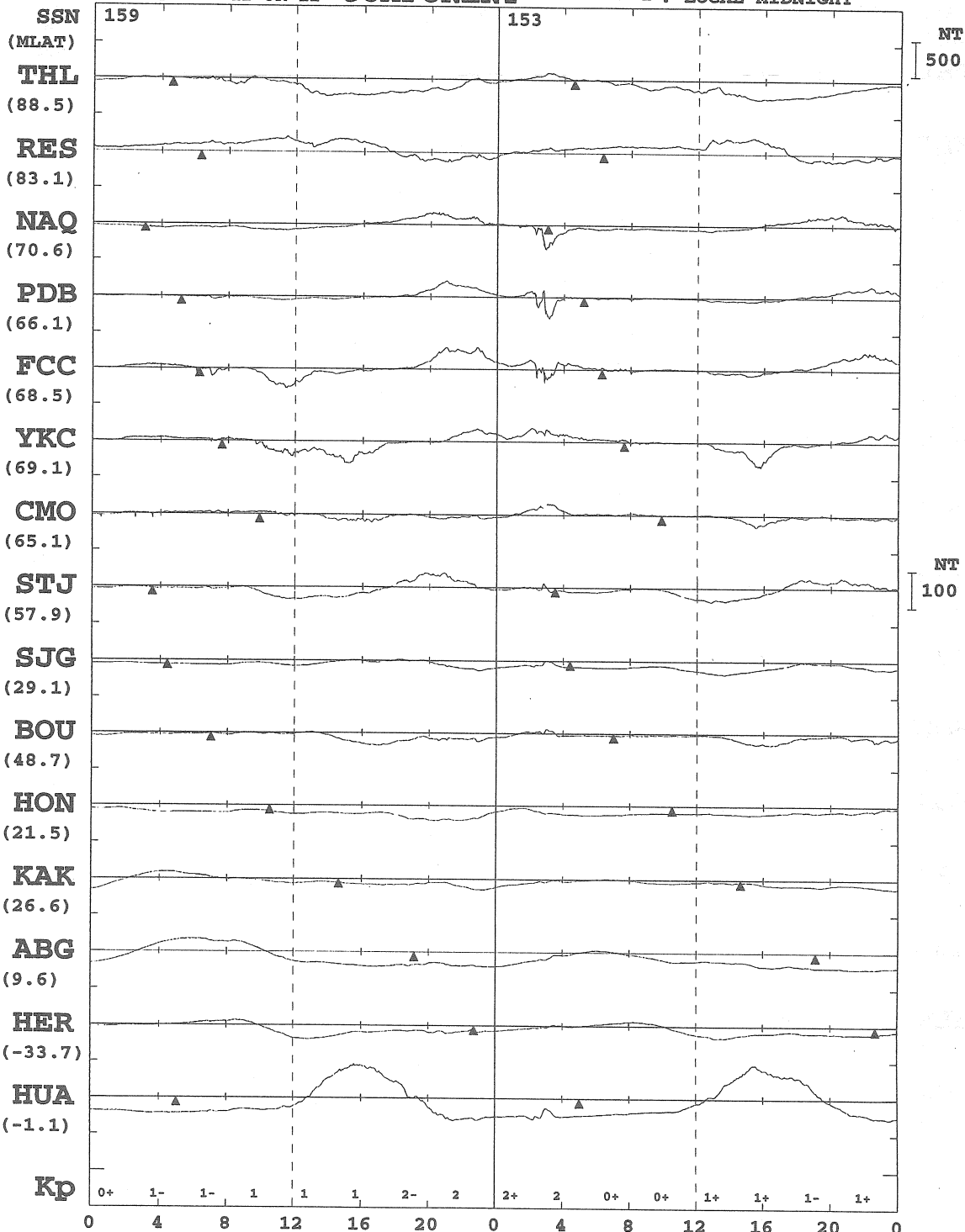


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUN 11  
(DAY 162)

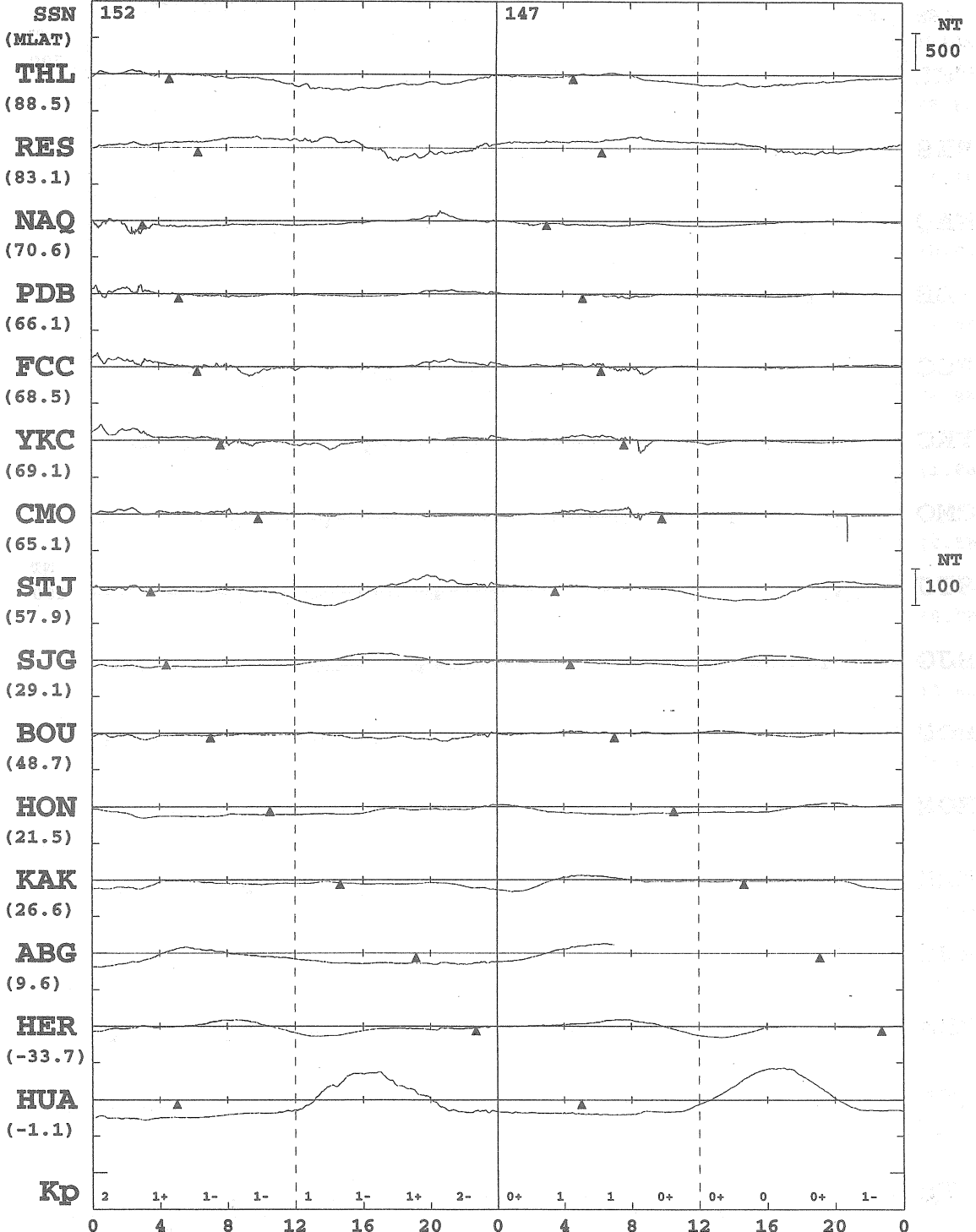
JUN 12  
(DAY 163)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUN 13  
(DAY 164)

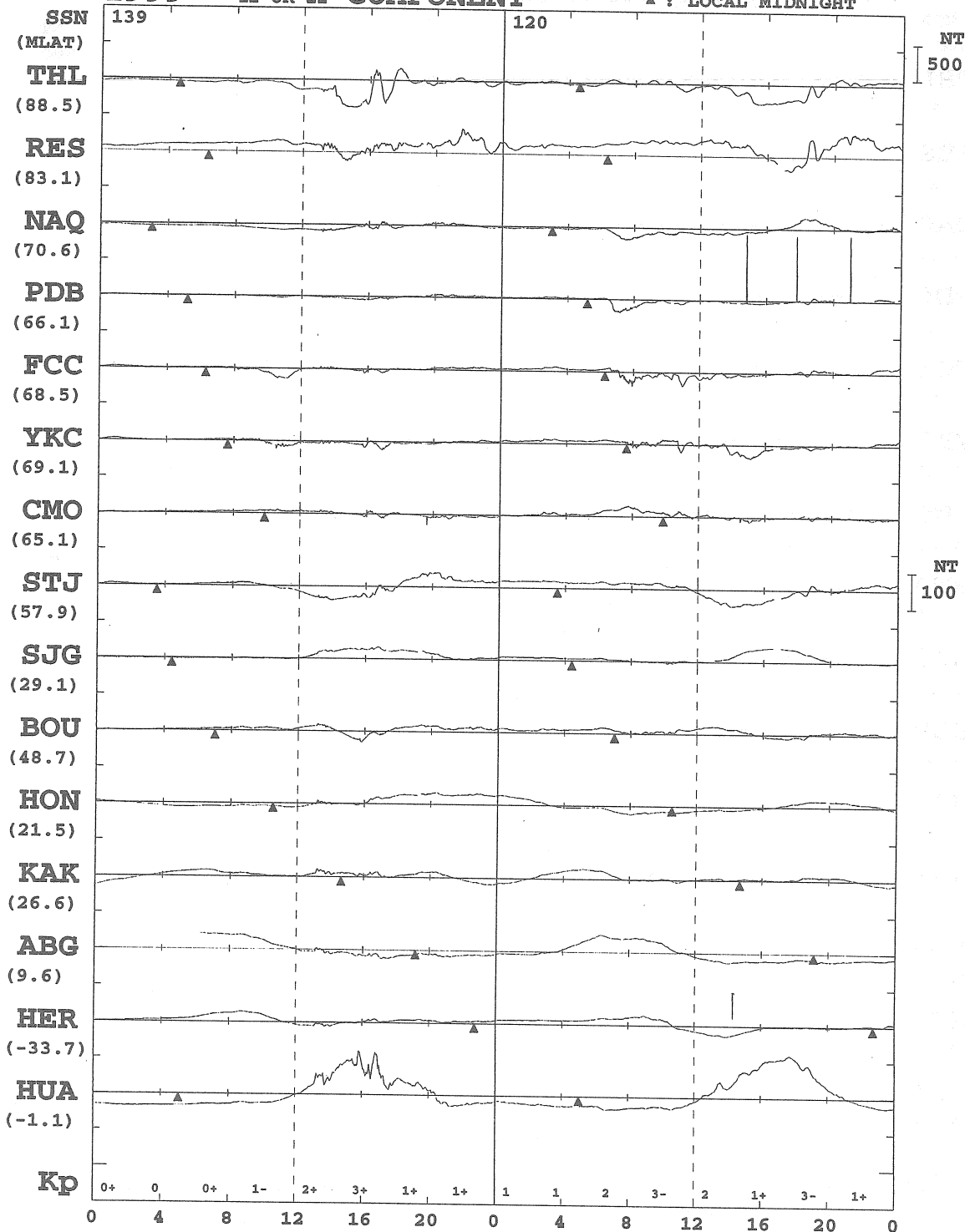
JUN 14  
(DAY 165)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

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**JUN 15**  
(DAY 166)

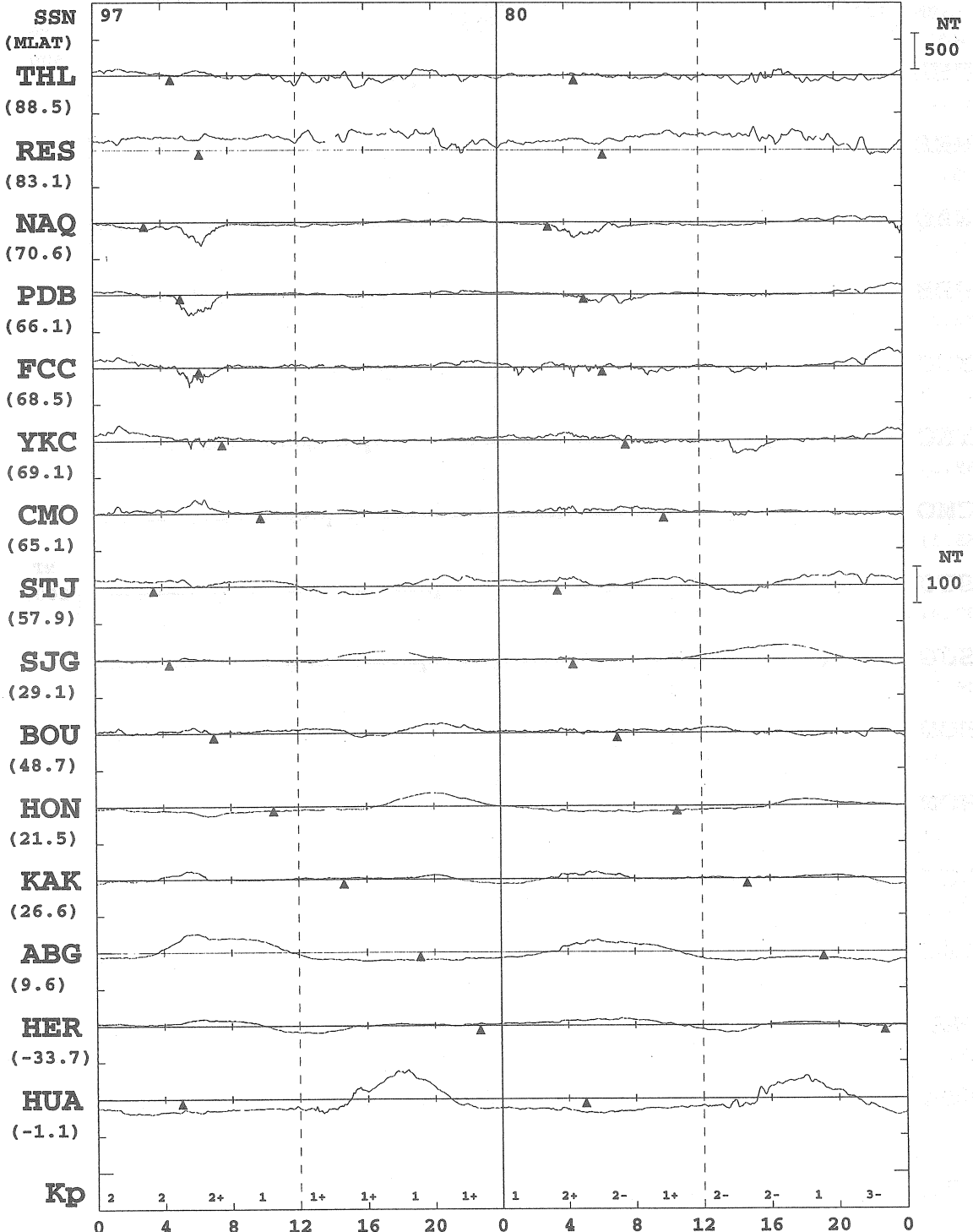
**JUN 16**  
(DAY 167)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUN 17  
(DAY 168)

JUN 18  
(DAY 169)

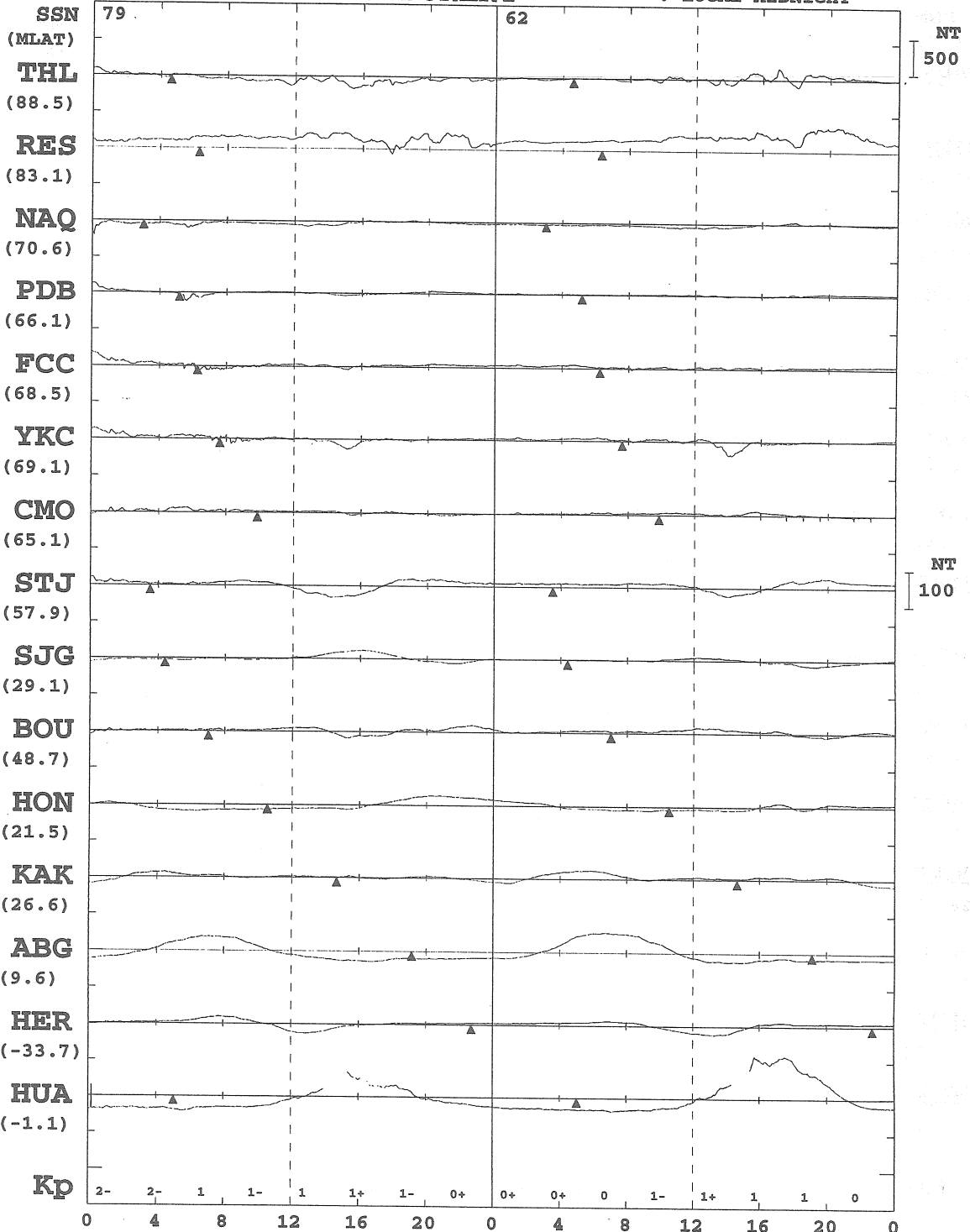
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



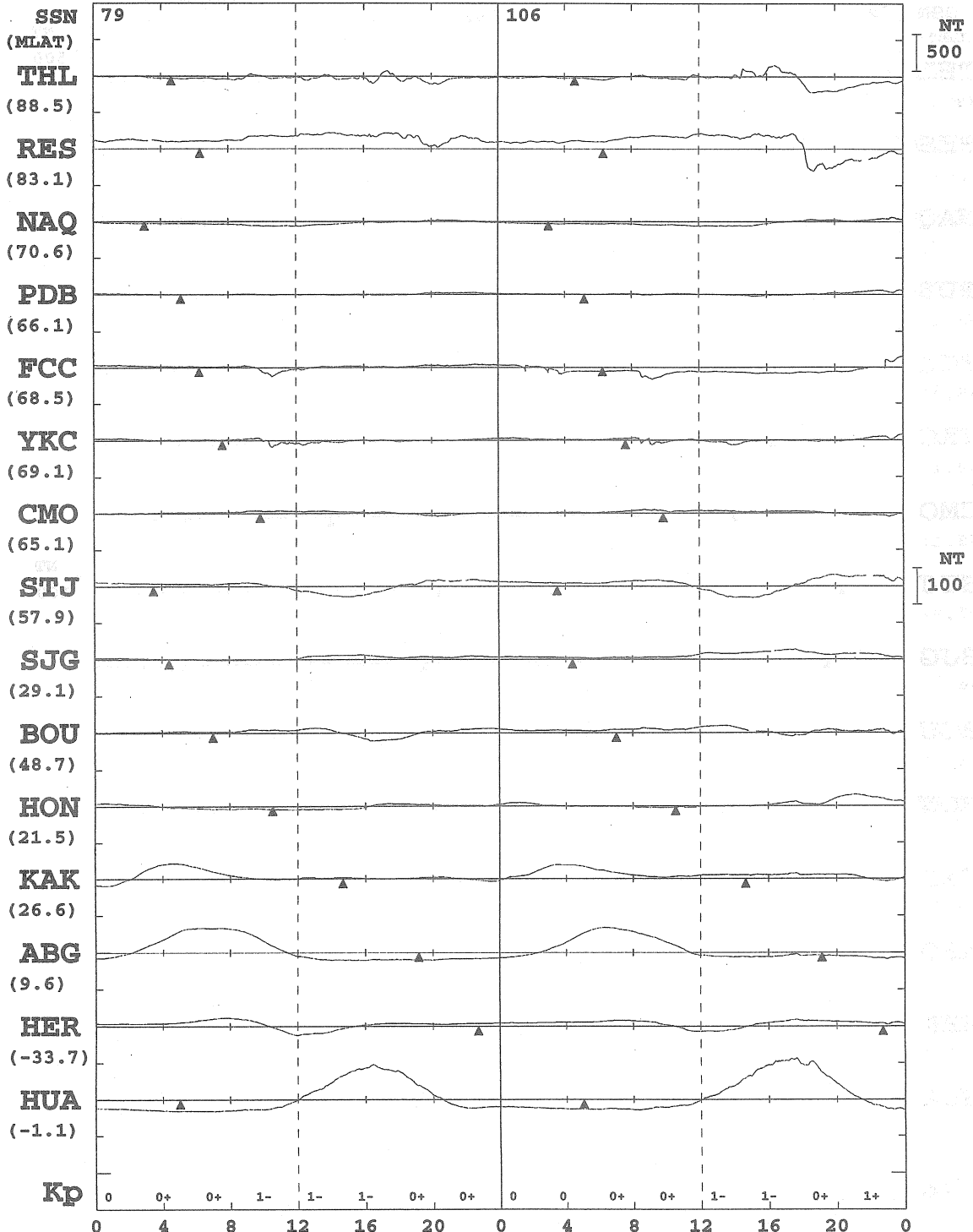
JUN 19  
(DAY 170)

JUN 20  
(DAY 171)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT  $\Delta$  : LOCAL MIDNIGHT



JUN 21  
(DAY 172)

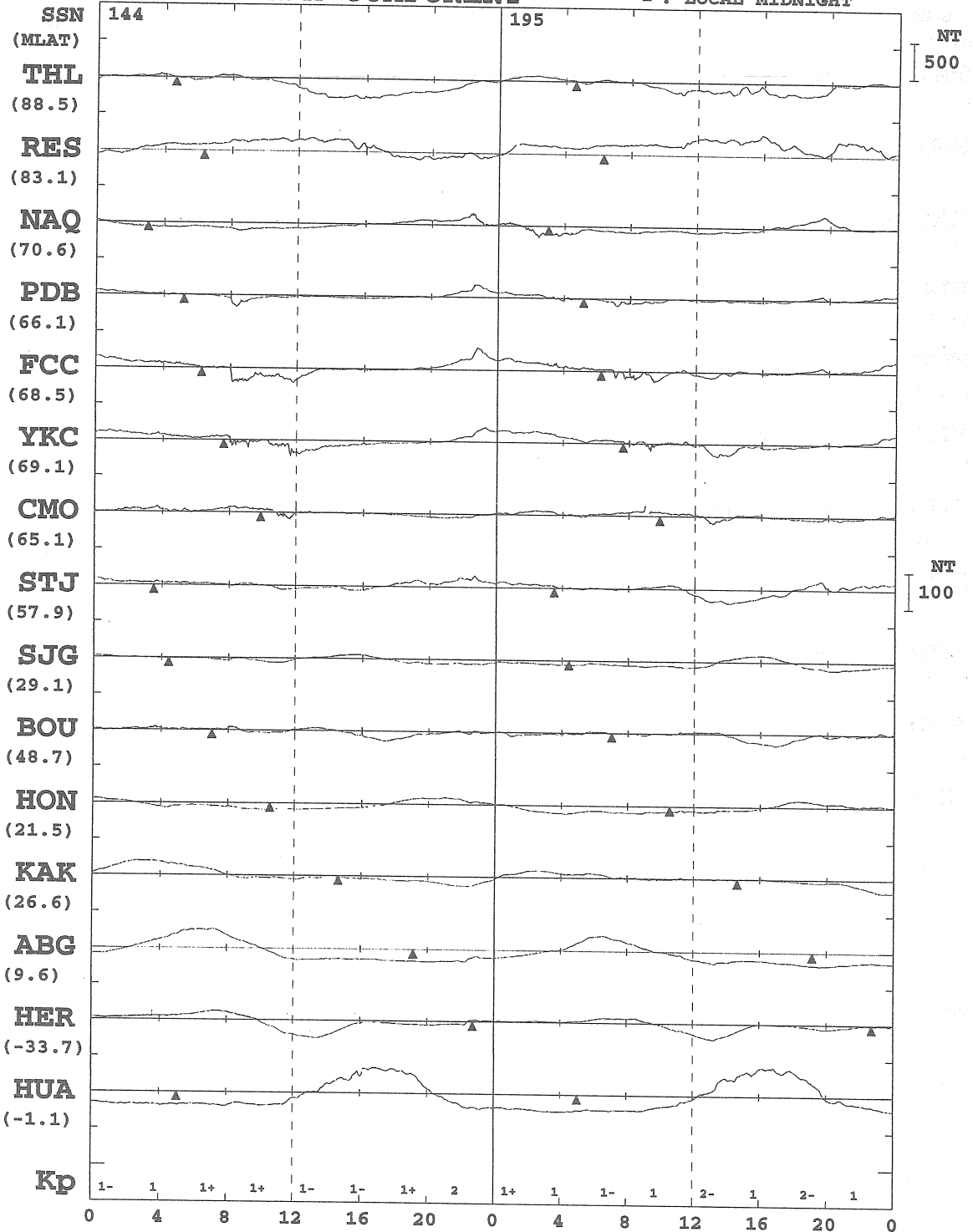
JUN 22  
(DAY 173)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

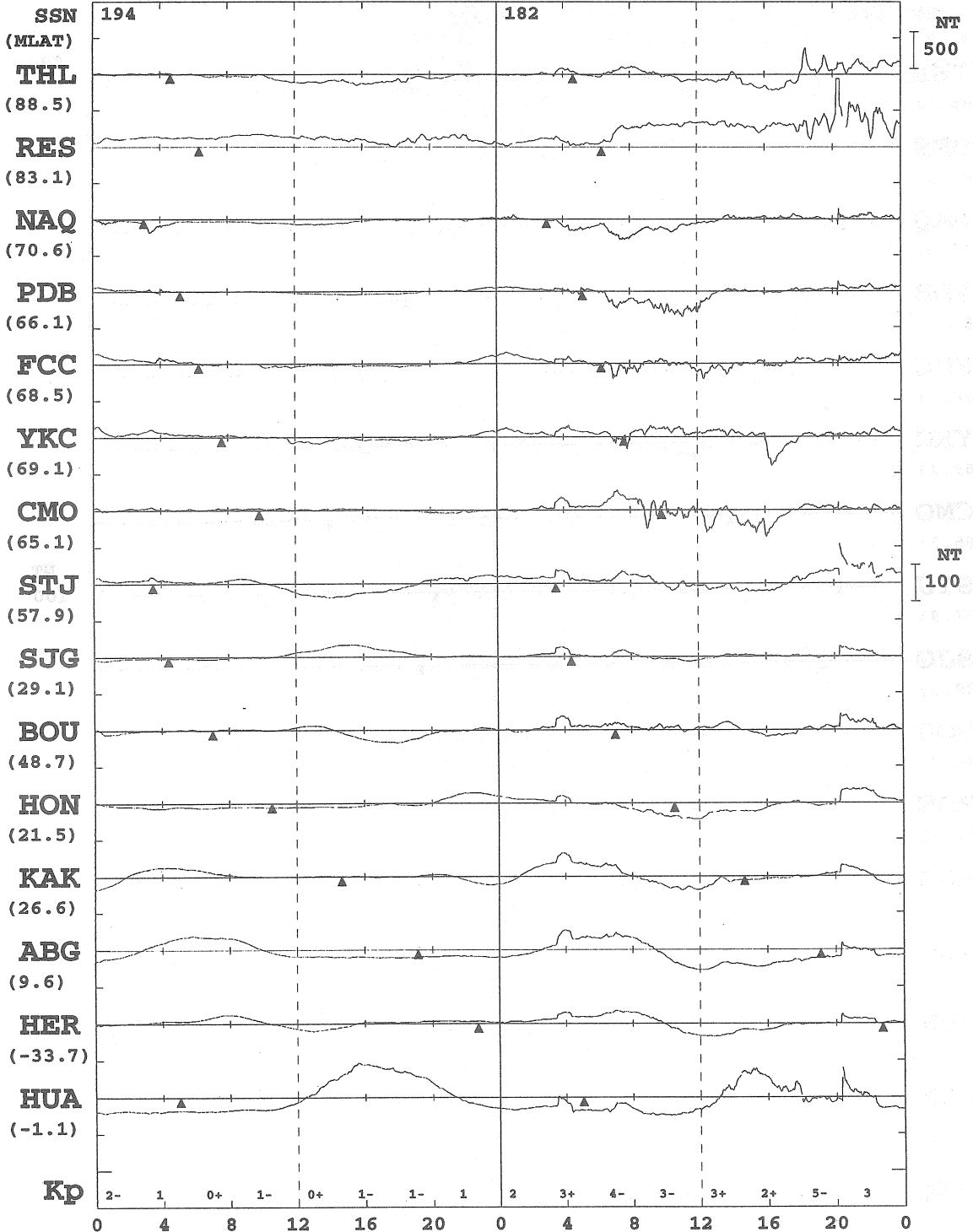


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

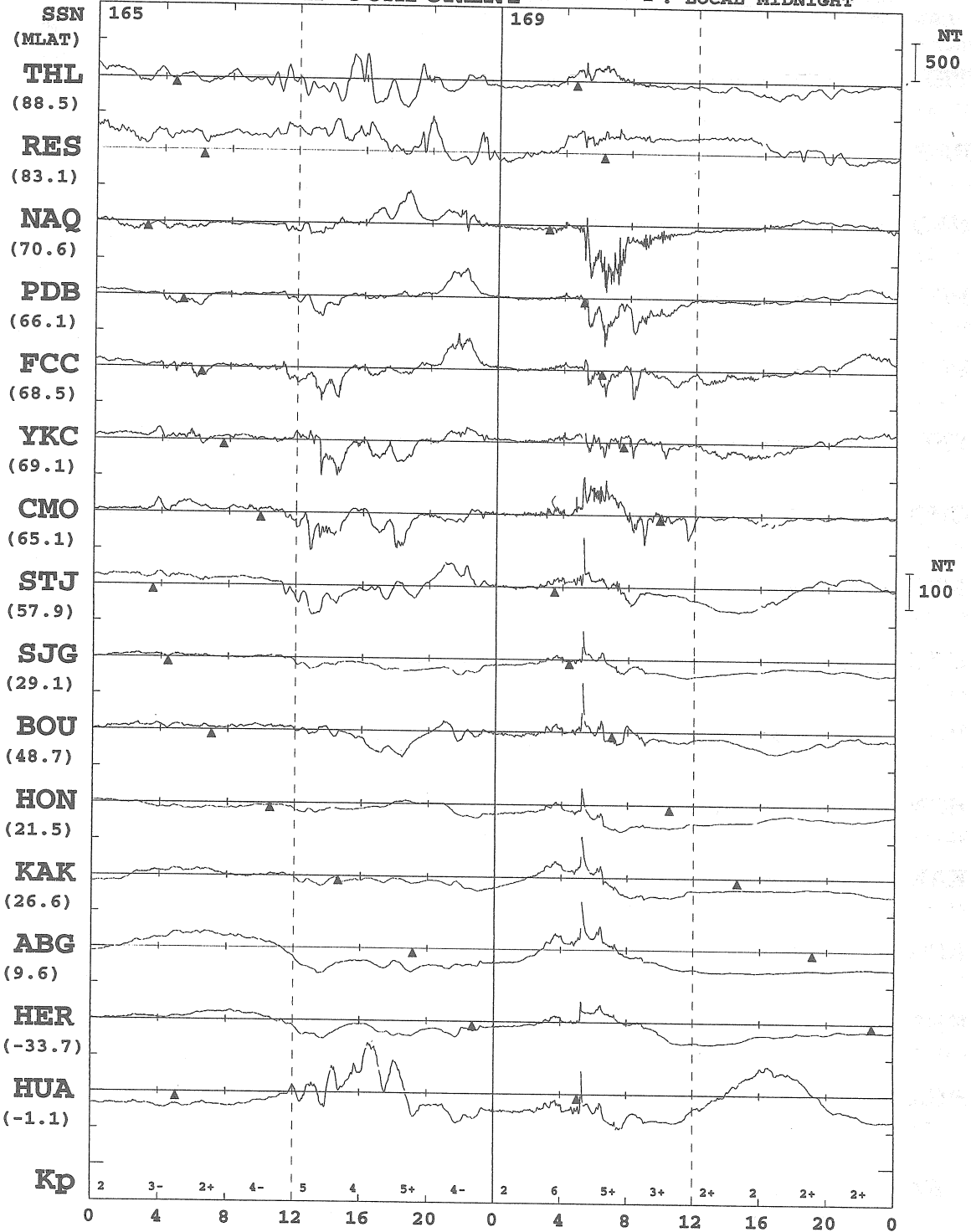


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUN 27  
(DAY 178)

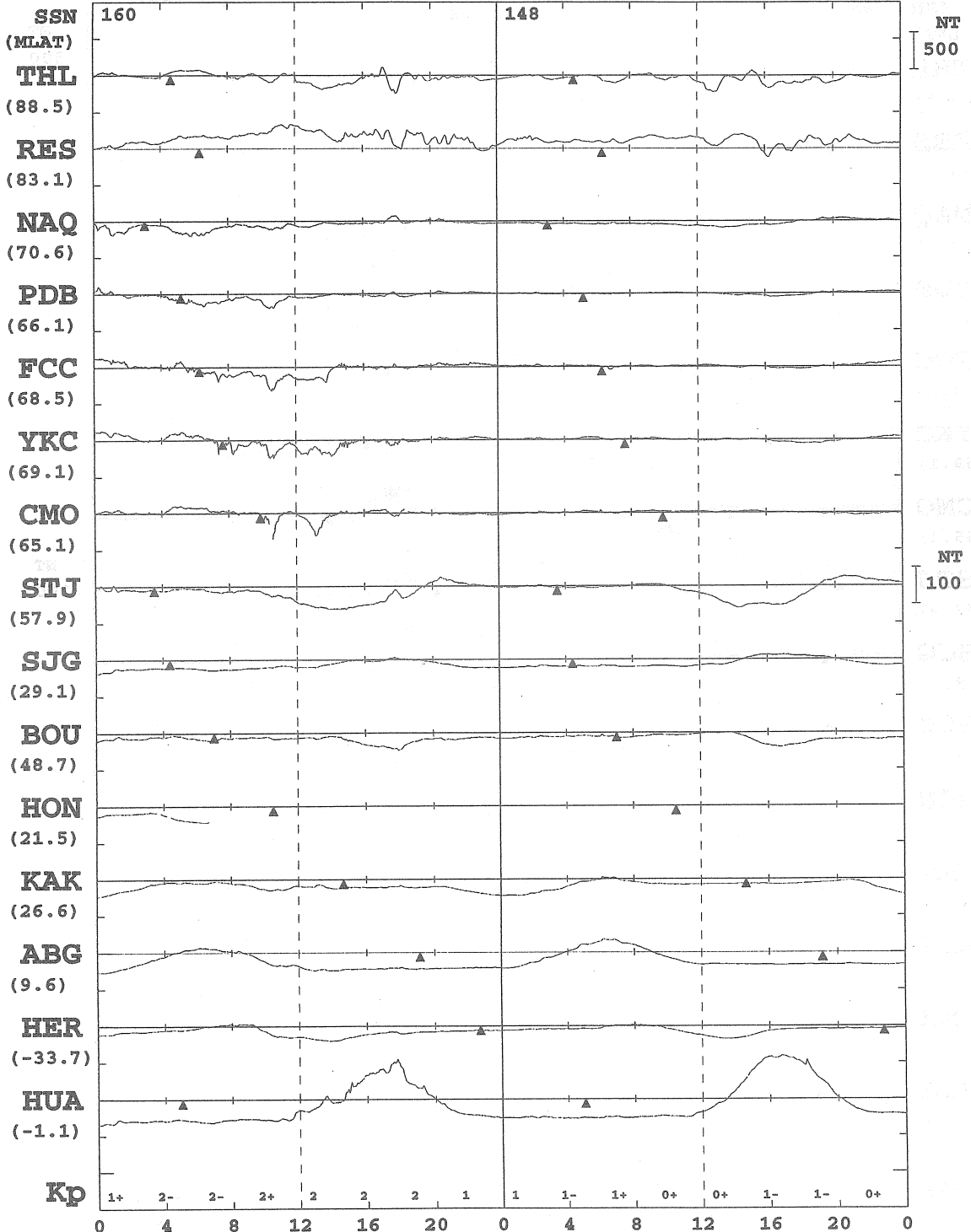
JUN 28  
(DAY 179)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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1999 H OR X-COMPONENT

△ : LOCAL MIDNIGHT



JUN 29  
(DAY 180)

JUN 30  
(DAY 181)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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